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IMPRESSIONS AND EXPERIENCES WITH THE ROYAL ARMY MEDICAL CORPS IN FRANCE.[1]

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It is only owing to the wonderful persuasive powers of our Honorary Secretary that I have consented to inflict on you these few notes of my impressions and experiences while working with the R.A.M.C. in a hospital ship, and afterwards in a field ambulance.

I will say this to start with, that, considering the vast forces in the field, the organization of the medical service, as carried out in France, is, in my opinion, something to be proud of.

I was first appointed to the hospital ship *Valdivia*, of 8,000 tons; she was splendidly fitted up as regards the hospital arrangements. There were 560 cots, divided into 11 wards, the upper deck having swing cots for the more serious cases, and the lower deck having two tiers of fixed cots for the less serious. There was also an officers' ward on the promenade deck. There were two lifts to lower the patients on stretchers down, one forward and the other aft. We also had several large cabins set apart for isolation purposes, two padded rooms for any violent mental cases, a nicely fitted up operating room and sterilizing plant. The staff consisted of a lieutenant-colonel (commanding officer), R.A.M.C., and seven temporary commissioned officers, twelve nurses and forty-seven orderlies. Our quarters were very comfortable, and we were fortunate in having no disturbing spirit amongst us. Our duties, when not carrying wounded, were not arduous; they consisted in taking our turn to be orderly officer, and as there were seven of us, this only came round once a week. The orderly officer for the day had to see any sick, inspect the ship morning and night, and report on the sanitary condition to the C.O., also to inspect the meals provided for the orderlies, and to report any complaints.

We left London at the beginning of January, and made our first trip to Havre, where we took on board over 600 patients, wounded and sick; the majority of them were suffering from frost bite and rheumatism. The sight of these patients affected me more than any case of wounded that I saw during my service in France; some hobbled on board by themselves, others were carried on orderlies' backs, and the worst cases were carried on stretchers; they all had the same, hopeless, haunted look on their faces, and it made one realize what a hell of misery and suffering that first winter campaign must have been.

As soon as the patients came on board, our first duty was to take their names, numbers, rank, regiment, time of service and what part of England, Scotland or Ireland they came from, as it was the object of the military authorities to send them as near to their homes as possible. We then did any dressings that were needed, and labelled every patient; the serious with a red bordered label and the milder cases with a white one, the object being to show at a glance which patients would be able to stand a long journey, and which not. As soon as all the patients were aboard we left, if the tide served. The journey across to Southampton generally took about eight hours, and on arrival there disembarkation was immediately commenced, and, thanks to the splendid arrangements they have there, this was generally completed in about three hours. When this was finished, we left the wharf, and anchored in Southampton water, or off Cowes, until we were wanted for the next trip. After our first trip we did not return to Havre, all our others being between Boulogne and Southampton; but our trips were few and far between, until the fight of Neuve Chapelle, in March, when we made three in rapid succession. The casualties during this advance were very heavy, and the wounded were hurried through to England as quickly as possible, as all the Base Hospitals in France were full to overflowing. The soldiers were wonderfully cheerful, and it was the exception to hear any complaint, and some of them must have suffered severely. The wounds were nearly all septic. This, I think, was due to the highly manured state of the French soil. Much of it was carried into the wounds, together with bits of clothing. The majority of the cases had to be re-dressed on board.

The worst trip we had was to Dublin, with 500 wounded. They were nearly all severe cases, and the last batch that we took after Neuve Chapelle. On this trip we had the patients on board for 72 hours. Several cases of gas gangrene made their appearance; one we managed to save by immediate amputation, but the others were in the buttock and upper part of thigh, where nothing could be done for them. We were all very glad when we reached Dublin, and were able to hand over our patients, to be divided amongst the different hospitals prepared for their reception. During our short stay at Dublin we were recipients of great hospitality and kindness. I had the pleasure of meeting Sir Lambert Ormsby, who showed me over the Orthopædic Hospital, with which he is connected. I found that he still used the Ormsby ether inhaler, which I remember being used in my student days, and he maintains it is still the best inhaler. I also met Sir Thomas Myles, who is consulting surgeon for the R.A.M.C., in Dublin. He is a real Irishman, and was the cause of our nearly missing our boat. He and a friend of his took a few of us for a motor trip the morning of the day we were to sail, our sailing hour being one o'clock. At a quarter to one we were at the entrance to the Phœnix Park, and he

[1] Read at a Meeting of the South Australian Branch of the British Medical Association on November 25, 1915.

proposed to drive us round, but we told him we must be getting back; he didn't see that there was any hurry, as he was sure they wouldn't sail without us, but we insisted, and assured him they wouldn't wait a minute for us. At last he gave way, and I hope it will never be my fate to be driven through a city at the racing pace like we were that day.

We reached the wharf at one minute to one, and the ship sailed at five minutes past.

From Dublin we returned to Southampton. This was my last trip, as, early in April, I received orders to report to the A.D.M.S. of the 7th Division, in France, for instructions, and, on doing so, was appointed to the 22nd Field Ambulance, then stationed at Estaires. The personnel of the 22nd Field Ambulance consisted of a lieutenant-colonel, captain (permanent R.A.M.C.) and seven subalterns, 220 R.A.M.C. men, and a few A.S.C. men to look after the transport.

A field ambulance is divided into three sections—A, B and C—each having a commanding officer and two subalterns, and each being provided with a complete field hospital equipment. It is also divided into two divisions—a tent division and bearer division. The bearer division consists of one medical officer and about 25 men from each section. They look after the advanced dressing station, just behind the trenches, where they receive all the wounded from the regiments under their care; there they give first aid and then send them on to the tent division, which is usually three or four miles further back, where all the cases are cleaned up, wounds dressed and anti-tetanic serum injected.

Where possible, a building in a village or town is selected for the site of the hospital; but when this is impossible, the work is done under canvas.

The 7th Division has three field ambulances, and when an action is on, one, as a rule, takes the sick of the whole division, while the other two attend to the wounded.

I think it would give you a better idea of the way the work of a field ambulance is carried out if I try to describe to you the preparation for and the work done during the attack made at Festubert. We were then stationed at Bethune, and occupied a large school. We were told to prepare for 1,500 wounded. We had a three-storey block of buildings, consisting of a large hall on the ground-floor, about 100 feet long and 40 feet broad, and two large dormitories above, of equal size. After thoroughly cleansing the whole building, we made the hall into our receiving room at one end, and at the other we had three operating tables, and another in a little room off this end. The dormitories we fitted up with straw mattresses. Besides this, we commandeered a church near by, and also had another large room, beyond the operating room, where the severe cases were put until they could be removed. The attack commenced about three o'clock in the morning, and the wounded began to arrive about five o'clock. At the start, there were six of us to do the work, but before eight o'clock, two of our staff had been called away to regiments, to fill the places of doctors who had been wounded, so, for the rest of the engagement, there were only four of us, with occasional help from the officer commanding. As the patients were brought in their names, regiments, numbers, etc., were taken by two orderlies. Then those on stretchers were placed in a row, to take their turn, while the walking cases sat on chairs and forms at the side of the hall. When a case was brought on to the table the orderlies cut away or removed the clothing from the wounded part under our supervision. The wounds were thoroughly cleansed with peroxide, and dressed, and then every man, however slight the wound, received an injection of anti-tetanus serum. When this was done he was removed to one of the wards, according to the nature of his wound. It will give you some idea of the amount of work done when I tell you that in the first 24 hours we attended to nearly 700 wounded, and during the three days that the attack lasted over 1400 wounded went through the ambulance. For the first 18 hours we never left the operating room, except to take it in turns to have quarter hours to get some food; and for three nights and days none of us had our clothes off. What made matters worse, it commenced to rain hard early in the morning, and as a result the wounded were soaking wet, and covered with mud. During the whole time the Red Cross Society were removing the cases that had been attended to, by motor ambulance, to the clearing hospital, and from there they were sent by ambulance train to the base; the chest cases and fractured femora were removed in hospital barges, and carried in them to the base.

I cannot speak too highly of the work done by the orderlies. They were untiring in their work, and were as gentle and sympathetic to the patients as any woman could have been. I must also express my admiration of the soldiers themselves; they bore their wounds and suffering with the greatest fortitude, and generally had a smile on their faces. There was one patient that I remember particularly. He was wounded in the back; he had been lying out in the rain between the trenches for 48 hours. He was carried in lying face downwards, chaffing with orderlies that carried him, and smoking a cigarette that one of them had given him. On examining him I found a large wound over the lower ribs, passing down to the lumbar region of the spine, caused by a time fuse of a shell. After giving him a little morphine I cut down on and extracted the fuse. It was covered with a piece of his great coat, and had broken the spinous processes of three or four vertebræ in its course, but apparently had not injured his spinal cord. After extracting it I gave it to him, and he said, with a smile, he would take it home to his wife as a trophy. This was only one case amongst many. At the same time that the wounds were being attended to, those that were waiting, and those that had been seen to were given soup, or food of more substantial nature, according to their condition.

After the attack was over, and our regiments were relieved from the trenches, you will quite understand that we were not at all sorry when we received orders to retire to a place about 12 miles back to recuperate, and have the regiments made up again to full strength with fresh drafts. Then our duties were very light, as we only had to take our

turn at orderly duty, and attend to the sick. The orderly's duties were to see all the sick brought in on his day, to go round all the billets with the Commanding Officer, and inspect the sanitary areas, and to see that the men carried out instructions.

Early in June we began to get a lot of cases of what we first thought was influenza, but afterwards went by the name of trench fever, until the authorities ordered us to sign them up as "P.U.O., *i.e.*, pyrexia of unknown origin. It started with severe pains in the limbs, and a temperature from 101° to 103°, which gradually reached normal about the fourth or fifth day, then the patient would have four days of normal temperature, followed by another attack, sometimes three or four, when the temperature finally remained normal. It left the patient very weak and nervous, very much like the condition following influenza when it first made its appearance amongst us. Up to the time I left they had not been able to discover the cause, though it was generally thought to be caused by the flies, and more stringent efforts than ever were taken to subdue the fly pest. Another disease that made its appearance about the same time was a form of acute nephritis. The first notice the patient had that anything was wrong with him was œdema of his legs (sometimes excessive). On examination his urine was found to be loaded with albumin, and contained casts. Under treatment those patients generally recovered completely in a very short time.

One thing the medical service can congratulate itself on is the wonderful freedom from enteric fever, notwithstanding the insanitary condition of the villages in the north of France. This I think is due mainly to inoculation and the great care taken to have all excreta incinerated where possible, and the use of fly-proof latrine seats.

The last few weeks of my stay in France I was appointed medical officer in charge of the 7th Divisional train, which is that part of the service that sees to the transport of provisions from the refilling point, *i.e.*, the place to which it is brought by motor transport from rail-head, to the different regiments. This train consists of about 500 officers and men of the Army Service Corps, with horses and transport waggons. My duties there were to attend to the sick, and see that the different camps were kept in a thoroughly sanitary condition.

THE SURGICAL TREATMENT OF BLADDER TUMOURS: A REVIEW OF THE OPERATIVE AND CYSTOSCOPIC (HIGH FREQUENCY) METHODS.

By **S. Harry Harris, M.D., Ch.M. (Sydney),**
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During the past five years a considerable literature has grown up, dealing with the treatment of tumours of the bladder. This has, perhaps, been more particular the case in America, where, owing to the concentration of effort in the large genito-urinary clinics, which form part of the hospital service of many of the more important institutions, long series of cases have been dealt with and methods of treatment standardized. Great strides have recently been made, both in open operative and in non-incisional methods of treatment, "until to-day," to quote H. A. Kelly, "there seems but little to desire beyond the more effective co-operation of both patient and practitioner in securing an earlier recognition of the disease, thus enlarging the field of radical operation in the infiltrating tumours, and anticipating the wide diffusion of the vesical papillomata." But even to-day, as statistics show, nearly 50% of bladder growths are too far advanced when first seen by the surgeon to offer any hope of permanent cure, whatever the method of treatment. As with carcinoma of the *cervix uteri*, early recognition alone affords hope of further improvement in results, and this can only be accomplished by the prompt and detailed investigation of every doubtful case. This applies with especial force to patients suffering from hæmaturia, or from unexplained symptoms of cystitis.

It is impossible for me to discuss in this place the subject of diagnosis in all its details, important though it be. It is self-evident that, according to the method of diagnosis and to the accuracy in interpreting the findings, the operative treatment will vary. After all the conditions have been considered, it is necessary to decide, first, whether an operation should be undertaken or not, and next, exactly what should be done. Schmidt writes:—

> I assume the attitude that in order to do a surgical operation expeditiously, accurately and correctly, it is highly desirable to know for one's self all the facts before proceeding, and not to be informed at the time of operation, as in some instances it might put the operator to great disadvantage, and bad results may follow, which might have been avoided had the operation been started with a full knowledge of the case. On the other hand, let one consider a case where all methods of diagnosis with which genito-urinary surgeons are familiar are employed, enumerating the more familiar and important: cystoscopic examination, which informs one as to the probable character, site and number of tumours, and allows portions of tumours to be readily removed for pathologic diagnostic purposes: X-ray examination of the air-filled and collargol-filled bladder: the various functional tests, etc. Under these circumstances, with a full knowledge and appreciation of the facts, how is it possible to proceed incorrectly?

Surgical treatment falls naturally into two categories: (1) incisional, and (2) non-incisional. The latter takes the form, in the vast majority of cases, of cystoscopic, high frequency cauterization, which seems destined entirely to supplant open operative forms of treatment in cases of papillary tumours of the bladder. This constitutes one of the greatest advances in conservative surgery of recent years.

(1) Incisional Forms of Treatment.

Open operative forms of treatment are of two types, the palliative and the radical. The former includes cystostomy and the various methods of exclusion of the bladder, while the latter includes partial and total cystectomy.

Instead of considering each of these operative methods in detail, it will be found more profitable to present a general survey and consider general principles, which are more or less widely applicable.

The operative treatment of bladder tumours, especially of a carcinomatous nature, ranks with Wertheim's hysterectomy among the most difficult operations in surgery. This is due firstly to the

inaccessible location of the majority of vesical tumours, and secondly, to the difficulty encountered in preserving the uretero-vesical relationship, necessitating in many cases abnormal deviation of the urine. If both ureteral orifices or the neck of the bladder be involved in carcinoma, the only operation offering a prospect of cure is complete removal of the bladder. When a carcinomatous tumour is situated in the posterior wall, it is advisable, if not obligatory, to open the peritoneal cavity. The operator may then determine the extent of peritoneal, lymphatic or visceral involvement, and may judge the advisability of proceeding with a wide block dissection, or, on the other hand, of abandoning a formidable and hopeless operation. Transperitoneal resection was first suggested by Rydygier, was performed later by Harrington, and was popularized by the Mayos. The technique is well known, and need not be further considered (*Annals of Surgery*, 1908, XLVIII., 105). One-half or even two-thirds of the bladder has been successfully resected, and the bladder has enlarged at a later date to satisfactory proportions.

Suture Material.

No. 2 plain catgut is the material most usually employed, especially for large incisions. By almost general consent chromic catgut is not used inside the bladder, except in rare instances, on account of the liability of calcareous deposit. Should it be considered necessary, as, for example, in some ureteral transplantations, interrupted sutures should be used, and removed later through the cystoscope. Should suture of the vesical mucous membrane be considered necessary, the finest plain catgut is to be preferred. As a rule, no suture of the mucous membrane is attempted. Numerous cases have been reported of stone formation, in which heavy, plain catgut or chromicized catgut has been the suture material employed, especially in the form of through-and-through suture. When the vesical mucous membrane is sutured separately with fine catgut, fine chromic gut may safely be employed for the muscular and fibrous layers, though it is not essential nor generally advised.

Drainage.

Unless the bladder presents evidence of marked infection, or a ureter has been transplanted, many authorities consider it unnecessary to drain either the peritoneal cavity or the bladder. If a small area in the base of the bladder has been allowed to remain unsutured, as, for example, in Thomson Walker's method of ureteral transplantation, or when marked cystitis is present, anterior drainage through a stab incision is indicated. Patients are, however, usually able to void small quantities of urine at frequent intervals, and are more comfortable without, than with, a retained catheter. In following this procedure, careful watching is desirable, and catheterization must be carried out according to the demands of the individual case. If this is not done, drainage must be considered. The bad results recorded by some authorities are probably due to the neglect to catheterize regularly in cases where it is indicated.

Vesical irrigation with 5% to 10% solution of resorcin should be instituted as soon as expedient after operation.

Of the new operative procedures, that of Bentley Squier (*vide infra*) stands out pre-eminently as the most important (*Surgery, Gynaecology and Obstetrics*, 1914, XIX., 91). The technique can be modified so that an extra-peritoneal or combined extra- and trans-peritoneal resection may be developed. Briefly, the steps are as follows:—

(1) A long, median, sub-umbilical incision is made, with the patient in the extreme Trendelenburg position, exposing the pre-vesical space.
(2) The obliterated hypogastric arteries are exposed by upward traction on the urachus and peritoneum, near the lower part of the incision. The obliterated hypogastric arteries stand out prominently, converging towards the traction forceps.
(3) The *vas deferens* is exposed by blunt dissection between the obliterated hypogastric artery and the lateral pelvic wall.[1]
(4) The next stage consists in the exposure of the ureters. The *vas deferens* is held taut and gentle, blunt disection downwards is made along its course. The ureter is exposed where it is crossed by the *vas deferens* and just prior to its entry into the bladder. Steps (3) and (4) are completed on both sides.
(5) The peritoneum is next separated from the posterior wall of the bladder. The urachus is divided close to the bladder, and from the two points of lateral dissection, the peritoneum is stripped off the posterior surface of the bladder. If the peritoneum is involved, it is left undisturbed and removed with the growth. The denudation extends deep into the recto-vesical space (in the male), the *cul-de-sac* of Douglas being pushed upwards and the bladder downwards. The superior poles of the seminal vesicles, the posterior surface of the trigone and the lower ends of both ureters and *vasa deferentia* are thus exposed (*vide* Figure). The hæmorrhage is inconsiderable.
(6) The next step consists in the repair of the peritoneum. If the peritoneum has been opened during the separation of the bladder it is carefully sutured.
(7) The bladder is then incised, exposing the tumour. A median longitudinal incision in the posterior surface of the bladder will be required in the majority of cases.
(8) The growth, together with a wide margin of healthy tissue, is then extirpated. If the ureter is affected, it is first divided between ligatures above the bladder and the distal portion removed with the tumour. The proximal end is left undisturbed until the growth is removed.

[1] A curious error has occurred in the author's original diagrams of this operation. He pictures the *vas deferens* crossing in front of the obliterated hypogastric artery instead of behind and external to it.

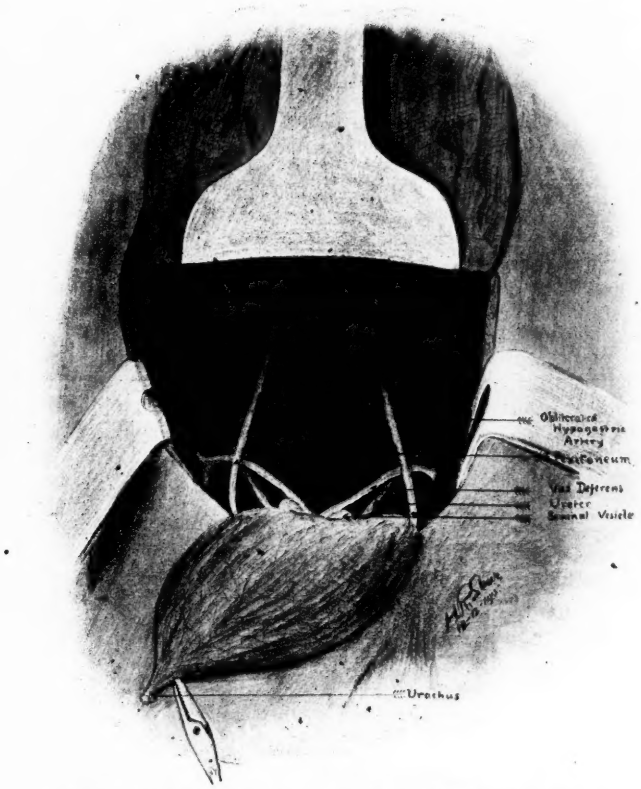
(9) The bladder is closed and the ureter implanted.

(10) The bladder is drained through a separate stab incision at the highest point of the bladder, which is anterior to the previous line of incision. A No. 26 F. soft rubber catheter is sutured *in situ*. The abdominal wound is closed after the peritoneum has been replaced over the denuded portion of the bladder. This is done in such a way that the peritoneal and bladder suture lines do not overlap. Rubber dam drains are placed in each lateral space leading to the ureters.

uterus, and all further operative work on the bladder becomes entirely extra-peritoneal. Provided the exact situation of the tumour has been determined before the operation, this little detail may be of great value.

In the case of growths in or about a ureteral orifice, preliminary ureteral catheterization is a time-saving manœuvre. Resection of the bladder wall or excision of a papillomatous tumour is greatly simplified by this procedure.

It has long been the custom of many operators to wash out the bladder thoroughly and then to empty it prior to operation. It is useful to pass a No. 8 English rubber catheter, and to attach an air-bulb



Bentley Squier's Operation; *subtotal cystectomy*, showing wide dissection, exposing both ureters, *vasa deferentia* and *vesiculae seminales*.

I have adopted this technique with a successful result in two cases of diverticulum of the bladder. On account of the excellent exposure of the ureters obtainable, it forms an ideal method of approach in these conditions.

There is another technical detail, which is of value in certain cases. It was first suggested by Mickulicz, and may be used in conjunction with Squier's operation, or independently of it. This is making a transverse incision in the peritoneum at the point of the attachment of the bladder and suturing the same to some peritoneal surface further behind. This is especially applicable in the female; the cut peritoneum can be united to the round ligaments and to the end. This enables the bladder to be distended with air from time to time during enucleation of the bladder. The air escapes constantly by the side of the catheter. By this means wide diffusion of sepsis or of portions of growths can be avoided when the bladder is opened, as the amount of urine secreted when the patient is in the Trendelenburg position is reduced to a minimum.

Hagner (*Surgery, Gynaecology and Obstetrics*, 1911, XIII., 326) locates the growth cystoscopically, and while the cystoscope illuminates, sutures are placed at sufficient distance from the growth, so that the incision can be made without unnecessarily cutting into the bladder. This manœuvre can only be of

value in those rare cases where the growth springs from the front wall or roof of the bladder.

When open operation has to be resorted to for a simple papilloma, it is not the general practice to resect the bladder wall unless there are numerous growths within a certain area. Some authorities, however, advocate this in all cases. When there are numerous growths, it is advisable to assume malignancy, and to treat the condition by wide resection (Squier's or Mayo's operations).

In all cases subjected to operation, it is a wise precaution to mop out the bladder with rectified spirits, or with a strong solution of resorcin, prior to closure, with a view to destroy any tumour cells which may have become detached (H. A. Kelly).

Total Cystectomy.

B. A. Thomas (*Surgery, Gynaecology and Obstetrics*, 1915, XXI., 146) summarizes the present position of this operation as follows:—

> Provided the patient has not passed into an inoperable condition owing to extension of his growth or organic state, the operation of total cystectomy is indicated in the following vesical conditions: (1) Single or multiple growths covering a wide extent of the bladder wall (not papillomata), (2) growths involving both ureteral orifices, the entire trigone, the vesical orifice or the prostatic urethra, and (3) intractable cystitis.

Total cystectomy is probably best performed by an extension of Bentley Squier's operation of subtotal cystectomy. It may be limited to a simple suprapubic excision of the viscus, or combined with a perineal operation, comprising a perineo-suprapubic cystectomy or a cysto-prostato-urethrectomy.

It is at best a desperate surgical procedure, though the risk may be considerably minimized by a preliminary operation for the deviation of the urine. In the male, probably the best procedure is that suggested by Watson. This is a bilateral nephrostomy and ureteral ligation, the kidney sinuses being allowed to granulate around small silver cannulæ, each of which is connected by tubing to a compound rubber urinal.

In the female, total cystectomy is probably best performed by Pawlik's method, the ureters being led into the vagina at a preliminary operation. Later, when the bladder is removed, the cut urethra is united to the vaginal wall, and the vaginal outlet closed, thus converting the vagina into a convenient receptacle for the urine.

Very few of these operations have been reported in the literature with a successful issue, and the scope must be a very limited one.

(2) Non-Incisional Forms of Treatment.

Radium and Mesothorium.

I have been unable to find a single recorded case treated successfully by these means. Possibly in the future, when more massive doses can be applied, the results may improve. At the present time, the scope of radium and mesothorium would seem to be limited entirely to the treatment of inoperable malignant tumours, through a cystostomy wound. Whether these or X-rays will have any place as a post-operative, prophylactic against recurrence time alone can tell.

The High Frequency Treatment.

The high frequency treatment of bladder tumours has been variously styled "desiccation," "cauterization," "electro-coagulation" and "fulguration." It consists in the application of the high frequency electric current to the bladder tumour, by means of an insulated wire introduced through the cystoscope.

The method was introduced by Beer, of New York, in 1910. To all intents and purposes, it merely gives us a painless and practical means of burning bladder tumours through the cystoscope, with water distension. With the best types of high frequency machines two currents are available, the monopolar or Oudin current, and the bipolar or d'Arsonval. The machine I use is made by Wappler, of New York. This, though somewhat costly, is quite compact and portable, and generates both forms of current.

The effect of the monopolar current is more superficial and localized when the usually short applications are employed, while that of the bipolar current is a deep baking or thermo-penetration. The monopolar current does not cause more than a relatively localized burn, while the bipolar current, if used in sufficient strength, can destroy the vitality of almost any extent of tissue. This constitutes both the danger and the seduction of the bipolar current. Many operators hope by its use to destroy even the carcinomatous base of a papillary bladder tumour, but the clinical experience accumulated up to the present appears to justify the conclusion that a vicious, malignant growth, however small it be, cannot be controlled by electricity in any form. It is only tumours of relatively slight malignancy that can be treated successfully by high frequency currents, and for these the monopolar current is quite sufficient and safer, since its action can be better controlled (Keyes, *Surgery, Gynaecology and Obstetrics*, 1915, XXI., 169).

Beer (*Annals of Surgery*, 1915, LXI., 735) has suggested recently the use of the bipolar current in large tumours, or at the periphery of smaller one, to be changed to the monopolar current as the pedicle or bladder wall is approached. In America, the monopolar current would appear to be used almost exclusively at the present time, while in Germany, where the treatment has been widely adopted, the bipolar current appears to be in greater favour. As Beer suggests, this is probably because they have not the apparatus for producing the monopolar current.

Contra-indications to cystoscopic treatment are:—hardness of the tumour, intractable cystitis, sloughing of the tumour, inaccessibility of the tumours and severe traumatic hæmorrhage, following the introduction of the cystoscope. None of these contra-indications is absolute, and each case must be considered on its merits. Caution must always be observed, and if the growth is not manifestly controlled after a few applications, a wide resection should be performed, as resistance to high frequency cauterization is an almost certain sign of malignancy.

Geraghty, of the Johns Hopkins Hospital, Baltimore (*Surgery, Gynaecology and Obstetrics*, 1915,

XXI, 154) has come to the conclusion that fulguration has been successful only in papillomatous tumours, and that it has been possible to destroy not only benign but also malignant papillomata. The response to treatment, however, in malignant as compared with benign growths is extremely slow. In the case of sessile tumours, with infiltration of the base, the chances of eradication by this method of treatment are practically nil, although considerable symptomatic relief may at times be obtained. Geraghty has only encountered recurrences in those cases in which malignant papillomata had been removed. He considers that it can now be positively stated that fulguration should be the treatment for all papillomata, benign or malignant, in which infiltration of the bladder wall has not occurred, and that it yields results incomparably superior to the most radical operative procedure.

Schmidt (*Surgery, Gynaecology and Obstetrics*, 1915, XXI., 162) has expressed his opinion as follows:—

> In the last few years the high frequency mode of treatment has apparently given universally good results, and I have had about 50 cases of my own. . . . . To neglect it is a surgical error, unless there be some definite reasons, such as hæmorrhage, size of the tumour or its location, which are scarcely possible, for its contra-indication.

Technique.

I am not qualified to discuss the relative merits of the various machines made for the purpose. The Wappler apparatus, as stated above, is extremely convenient and portable. The maker of this apparatus has recently placed on the market a very satisfactory bone-tipped and non-fusible insulated electrode, which obviates the annoying necessity of frequent removal from the cystoscope of the rubber insulated wire previously used. This wire used to fuse from the heat generated, and to require frequent renewal.

Beer formerly maintained that copper wire was preferable to steel, but this does not appear to be material. I use the Brown Buerger operating cystoscope, which readily admits the No. 10 F. bone-tipped electrode referred to above, and prefer an accumulator or dry-cell apparatus for the illumination of the cystoscope, the high frequency apparatus being connected up with the street current. This obviates the possibility of electric shock to the patient and operator, which, though perhaps not dangerous, is decidedly unpleasant.

With the monopolar (Oudin) current, the high frequency terminal is connected up to the cystoscopic applicator, the tip of which is then pushed among the villi of the tumour, the bladder being well distended with sterile water. The current is then, and not till then, turned on. No spark should appear. Gas bubbles are immediately emitted, and the portion of the tumour in contact with the electrode becomes blanched. No pain should be caused. The spark-gap of the high frequency machine may be varied with the patient's sensitiveness, being larger when well away from the bladder wall, and smaller when close to it. It may vary from a ¼ to ⅛ inch. The longer the gap the stronger the current. The accepted duration of each cauterization is 30 seconds. As many cauterizations are effected at each sitting as the patient will permit. The patients are nearly all over 40 years of age, and generally tolerate cystoscopy without general anæsthesia.

With the bipolar (d'Arsonval) current, the same technique is employed, except that one pole is connected up with a flat, metallic plate, on which the patient lies, the other pole being connected with the cystoscopic applicator.

Frequency of Treatment.

Since the burned bits of tumour are not, as a rule, thrown off for at least 12 to 14 days, this is the usual interval allotted between the sittings, but a tolerant and impatient patient, with a tumour so extensive that it cannot all be treated on any one occasion, may encourage more frequent treatment.

Urinary antiseptics should be administered throughout, and most careful operative asepsis maintained. Hospitalization between the treatments is unnecessary, but the patient should always be in touch with the practitioner, as certain complications may arise which call for prompt treatment.

Complications.

The chief complications to be guarded against are hæmorrhage and sepsis.

Sepsis.

Sepsis is often present when treatment is first instituted. If at all troublesome it should be treated by vesical irrigations with silver nitrate. Several cases of alkaline cystitis have been reported, in which marked improvement followed injection of, or irrigation with, Bulgarian bacilli. Severe cystitis, which cannot be controlled, is generally an indication of malignancy, and should be treated by radical operation.

Haemorrhage.

The sloughs of burned tissue may begin to come away within two or three days of the cauterization, although this usually takes place during the second week. Quite a smart hæmorrhage occasionally occurs at this time. Rarely the clots have to be aspirated through a litholapaxy tube, followed by the wearing of a soft rubber catheter for 24 hours. The patient should be informed of this, both to prevent undue alarm and to ensure appropriate treatment. Among two hundred cases collected by Beer there were three instances of severe bleeding. Keyes (*Surgery, Gynaecology and Obstetrics*, 1915, XXI., 174) points out that hæmorrhage is one of those important complications that cannot be fully guarded against, but that may be controlled by expert treatment.

Relapses.

The cases may be divided clinically into two types. In the one type the tumours are few in number, and show no tendency to multiply. In the other, multiple tumours are met with at the time of the first examination, and this suggests a tendency to surface inoculation. This suggestion is often borne out by the appearance from time to time of recurrence in various parts of the bladder. These recurrences

cannot be guarded against, either by cystoscopic or operative treatment. It is in these cases that the cystoscopic treatment, offering, as it does, an ideal opportunity for repeated attack upon the neoplasms while they are still young, is immeasurably superior to operation.

It is further to be noted that careful examination of the bladder in these cases usually discloses a number of small tufts that may be burned off very readily, thus preventing the development of further tumours. These would almost certainly be missed at a suprapubic operation.

The relapses with which we are particularly concerned are tumours occurring at the point from which a tumour has been burned away. They not infrequently appear during the first three months after the apparent destruction of the tumour, and therefore must be guarded against by a confirmatory cystoscopy at this interval. If this confirmatory cystoscopy shows the site of the tumour to be normal, the prospects of further relapses at this point are extremely small. We are, however, not in a position to estimate with any degree of accuracy the probability of recurrence of bladder growths. Accordingly, the suggestion has been widely followed to re-examine cystoscopically every three months for the first year, every six months during the second year, and again at the end of the third year.

In conclusion, I cannot do better than summarize a recent paper by Gardner (*Annals of Surgery*, 1915, LXII., 147), an abstract of which has already been published in *The Medical Journal of Australia*. The author reviewed the results obtained during the past fifteen years in 1,702 cases of tumours of the bladder by various well-known American urologists, including cases treated by all the different methods.

The results proved conclusively the superiority of the high frequency cystoscopic treatment for papillomata, and the futility of anything short of wide resection of the bladder wall or sub-total cystectomy for malignant growths.

In the cases of malignant growths in this series, in which suprapubic cystotomy and excision of the tumour alone were performed, recurrence occurred in 88%, while, after partial cystectomy, recurrence occurred in only 33%, and the primary mortality was considerably less.

In cases of papilloma, in which excision was practised, the growth recurred in 35.5%, whereas, with high frequency treatment, there was recurrence in only 13.1% of the cases.

He formed the following conclusions:—

(1) In the treatment of carcinoma the transperitoneal method, as used in the Mayo Clinic, or the sub-total cystectomy of Squier, with wide resection of the bladder wall, affords the best results.

(2) Cystotomy and excision, and actual cautery should only be used in terminal cases, and as the palliative method to relieve pain and hæmorrhage.

(3) When the growth involves both ureters, Watson's operation of total cystectomy, with primary operation for deviation of the urine, such as bilateral nephrostomy and ureteral ligation, show the best results.

(4) In the treatment of papilloma, the cystoscopic high frequency current, during the short time it has been used, has given better results than any other method.

Due acknowledgement must here be made to the following authorities, whose writings have been consulted and in places freely extracted: H. A. Kelly, E. L. Keyes, B. A. Thomas, L. E. Schmidt, W. J. Mayo, Bentley Squier, J. T. Geraghty, E. Beer, Thomson Walker, E. S. Judd, F. R. Hagner, J. A. Gardner and L. Buerger.

Reports of Cases.

APPENDICITIS WITH CAECUM ON THE LEFT SIDE

By **Harold South, M.B., Ch.B. (Melb.),**
Boonah, Queensland.

Dr. Corlette's case in *The Medical Journal of Australia* of November 27, 1915, has the full title "appendicitis with cæcum and ascending colon on the left side." I have recently had a case in which there was no real ascending or transverse colon, and in which the caecum was wholly left-sided.

E.G., aet. 7½ years, was seen by me on November 6, 1915. Previous history: When three weeks old I treated him medically for obvious pyloric trouble. He was wholly breast-fed; he had severe vomiting at varying intervals after meals, and was losing ground. Regulation of meals allowed nutrition to proceed, but the child was never robust. Occasional abdominal attacks of indefinite nature have occurred. I did not witness any of these, but am informed that they were treated with homely remedies, presumably without disaster. The present attack began four days before, with abdominal pain; for the last 24 hours there had been constant vomiting. The temperature was 101°, and pulse rate 110. He had the anxious look associated with an acute abdominal condition to a marked degree. The abdomen was tender all over, but especially so immediately to the right of the umbilicus, and there was fluid dulness in both flanks. Appendicitis was diagnosed, and instant operation advised, but the child lost some more ground before the parents made up their minds and consented.

The incision was a high one along the outer edge of the right rectus, stopping just below the umbilicus. Straw-coloured fluid flowed freely out when the peritoneum was opened, and the abdominal walls became lax and easy to retract. The absence of a great omentum was very striking and puzzling at first, when the small intestine presented in the wound. On searching the right side I found nothing but small intestine occupying the iliac fossa and the site of the caecum, and ascending, and transverse colons. On retracting and elevating the left edge of the incision the wholly left-sided caecum was seen lying below and against the great curve of the stomach. The ileum entered the caecum from below, and the caecum was large, thick-walled, and very moveable, having a long meso-caecum, itself an abnormality. The usual ascending colon was represented by a short, wide piece of bowel, which curved outwards and downwards into the straight and firmly attached descending colon. There was nothing to suggest any rudimentary omentum. The appendix was a long continuation of the apex of the caecum, funnel-like for about half an inch, and containing two concretions near the tip. It was acutely inflamed. There was a sickle-shaped meso-appendix, the veins of which formed a regular varicocele.

The child was too ill to permit investigation after the appendectomy, and I cannot say anything of the rest of the condition beyond that the whole length of small bowel seemed very deficient, and that the mesenteric lymphatics were extraordinarily clearly mapppd out. Recovery has been uneventful.

The pyloric difficulty of the child's babyhood warned me to expect an abnormality, but not the one that was present. The especially tender spot was at a very high McBurney's point, and corresponded with the inflamed concretion-bearing tip of the appendix.

Dr. Corlette's patient apparently had a left-sided caecum at the same abdominal level as a normal caecum; but in this child the caecum was very much above the normal level, adjacent to the lower zone of the stomach. The only flexure of the colon was near the spleen. It is not technically accurate to call this the splenic flexure, as that term is employed for the transverse and descending colon junction in the normal. The short wide bowel next the moveable caecum had a wide attachment, and no meson, and merged directly into a similarly anchored descending colon.

The condition is certainly surgically disconcerting. Retrocaecal and adherent appendices strain patience and ingenuity at times, but a high left-sided caecum, with an acutely inflamed appendix, is notably and fortunately rare.

Reviews.

COLLOIDS.

Ostwald's reputation in physical chemistry is so secure that any deliberate publication written by him must occupy a foremost position in scientific writings. His book on "Colloid Chemistry,"[1] which has at length been translated into English, is probably his best effort, and no biologist, organic chemist or physicist can afford to be without a copy of it. The translation has been undertaken by Professor Martin H. Fischer, in collaboration with Dr. Ralph E. Oesper and Dr. Louis Berman. We can congratulate these three gentlemen on their faithful rendering, able editing and pleasant style. In a few places we have noted a tendency to adhere rather too rigidly to the original expressions used, but the sins of this kind are few. Italics are used with an extravagance which is strikingly in discord with the measured method of presentation of the author and with his modest admission of ignorance. This slight criticism notwithstanding, we welcome the English translation of this important work, and recommend it in preference to the original to all save those who have acquired a complete mastery of the German language and especially of scientific German.

The author deals with colloids from A to Z. He informs his reader how to recognize them, what the colloidal state is supposed to be, what the general and special characters of colloids are, and what is known of the physical, mechanical and chemical properties of the various phases of the colloidal state. Although colloids are the most important of the bodies in nature, or perhaps it should be stated that bodies in a colloidal condition are the most important, very much concerning disperoids, suspensoids and emulsoids has been gussed at rather than analysed, and at every corner in the field of research among colloidal substances we are met with a still unfathomed mystery. The assistance which optical methods have lent in the study of these problems is forcibly demonstrated throughout the book. Thanks to the ultramicroscope of Seidentopf and Zsigmondy, it is possible to gain some conception of the physical conditions of particles of colloids. The ordinary microscope reveals particles with a diameter of about 0.1 micron. The ultramicroscope illuminates particles of about 6 ultramicrons, whereas the molecular diameter of sugar is 0.7 ultramicron, of water vapour 0.113 ultramicron and of hydrogen between 0.159 and 0.067 ultramicron. The field of colloidal chemistry is said to begin with particles of 0.1 micron, and to extend to particles of about 1 ultramicron.

The optical method is limited in its scope, and in a great many instances fails to carry us to our coveted goal. For example, the direct proof by optical methods of crystallinity in colloids, or rather of a crystalline constitution of the disperse phase of various sols cannot do more than bring evidence of probability. Ostwald rises to a great height when dealing with indirect proof, in which he never allows speculation to obsess his mind or to obscure his mental horizon. The chapters on surface tension and the general energetics of the dispersoids, leading to a discussion of the theory of dispersion and condensation, are written in a most fascinating way, and render the views of workers in a difficult field of research transparently clear. Viscosity, dispersion and compressibility are dealt with in the same masterly way.

The subject of Brownian movement receives skilful treatment, and is largely divested of the imaginative side, with which many authors have clothed it. It is impossible to discuss these matters, to attempt an explanation of diffusion or of spurious diffusion of colloids, or of concentration in colloid systems, within the limits of a brief review. It is also unnecessary to criticize Ostwald's presentation of these and analogous subjects. The student must learn from the original source, and we can confidently advise him to regard the English translation of Ostwald's work as the best fountain-head for this chapter of scientific knowledge.

[1] A Handbook of Colloid-Chemistry: The Recognition of Colloids, the Theory of Colloids and Their General Physico-General Properties, by Dr. Wolfgang Ostwald, Privatdozent in the University of Leipzig. First English Edition, translated from the Third German Edition, by Dr. Marton H. Fischer, Professor of Physiology in the University of Cincinnati, with the assistance of Ralph E. Oesper, Ph.D., Instructor in Chemistry, New York University, and Louis Berman, M.D., Staff Physician, Mount Sinai Hospital, New York, 1915. Philadelphia: P. Blakiston's Son & Co.; Royal 8vo., pp. 278, with many diagrams.

Hospitals.

MELBOURNE HOSPITAL.

The Annual Report of the Melbourne Hospital for the year 1915-16 has been issued in book form, and contains the report of the Committee of Management, the financial statement, the Acting Medical Superintendent's report, the Acting Lady Superintendent's report, the Acting Ophthalmologist's report, the Acting Dermatologist's report, the Skiagraphist's report, the Medical Electricians' report, the report of the Sub-Director of Pathology, and tables of operations and diseases in addition to various lists of contributors, life governors, etc., etc.

Financial.

The Chairman calls attention to the serious position of the financial affairs of the hospital. The new hospital building, with the vast increase in accommodation, have necessarily involved the institution in a considerably increased expenditure. In the past six years the amount spent on salaries and wages has increased from £10,074 to £18,477. During the past three years the drug and dressings bill has increased almost 100%. While the expenditure has been increasing by leaps and bounds, the income has remained almost constant. The Committee have therefore been forced to arrange for an overdraft in respect of maintenance of over £13,000. When the new hospital is completed it will be necessary to find an additional income of £10,000 a year, if the work is to be carried on in an efficient manner. The total amount expended on maintenance, administration, and a subscription to the Charity Organization Society of one guinea amounted to £40,397 7s 3d. The ordinary income yielded just over £31,000, of which £10,500 were derived from Government grants. Charitable contributions from the public yielded close on £8,300, whereas bequests amounted to £2,300. The total income, including bequests, is given at £33,524 1s 11d. It thus appears that the Government provided, in the form of subsidy, 31.3% of the income, while the charitable public provided 31.59%. It appears from the Medical Superintendent's report that the average daily number of patients within the hospital was 345. On this basis the upkeep of the hospital costs the Committee the sum of 6s 5d per patient per day.

New Hospital Buildings.

The erection of the new hospital buildings is proceeding steadily; the admission block has been completed, and is in use, and a block of surgical wards, as well as a block containing kitchens and other domestic quarters, is approaching completion.

The Medical Staff.

The Medical Superintendent, Dr. J. T. Tait, was granted leave of absence to enable him to join the staff of the First Australian General Hospital. Dr. J. A. Smeal was appointed Acting Medical Superintendent on November 25,

1914. The following members of the professional staff have been granted leave of absence to enable them to serve the Empire:—Mr. Fred. D. Bird, Dr. J. Gordon, Mr. G. A. Syme, Dr. H. C. Maudsley, Dr. J. W. Springthorpe, Dr B. T Zwar, Dr Victor Hurley, Dr. R. R. Stawell, Dr. R. H. Strong, Dr. J. W. Barrett, Dr. W. Kent Hughes, Dr. A. W. F. Noyes, Dr. R. H. Fetherston, Dr. R. W. Hornabrook, Dr. J. S. Yule, Dr. A. J. Trinca, the late Dr. G. C. M. Mathison, the late Dr S. J. Campbell, Dr. A. F. Bell, Dr. W. E. Summons, Dr H. H. Turnbull, Dr. H. H. Woollard, Dr. R. M. Downes, Dr. W. G. D. Upjohn, Dr. A. M. Wilson, Dr. J. T. Tait, Dr. W. A. Hailes, Dr. W. W. S. Johnston, Dr. R. F. Watson, Dr. M. V. Southey, Dr. C. Checchi, Dr. H. R. Dew, and Dr. G. E. M. Stewart. Dr. F. G. Meade, the Surgical Registrar, has resigned his office for the purpose of undertaking military duty.

Appropriate paragraphs are inserted in the report in connexion with the late Dr. Mathison and the late Dr. S. J. Campbell.

Two members of the committee have died during the year, viz., Alderman Strong, and Dr. Westmore G. Stephens.

Nursing Staff.

Miss Bell, the Lady Superintendent, was granted leave of absence for the purposes of taking up duty at the seat of war. Ten hospital sisters and a number of nurses were also granted leave of absence for the same purpose.

Work in the Hospital.

During the year 6,162 patients were admitted into the wards. Of these 158 were admitted a second time during the year. It is not stated whether the second admission was for the same affection as the first or not. There were 328 patients in the hospital at the beginning of the year, and 333 at the end. Death occurred in 886 patients; in 233 instances it took place within 48 hours of admission. The mortality is given at 13%.

The number of operations performed during the year was 3,129, of which nearly one half were minor operations. As is usual in hospital statistics, operations on the appendix are the most numerous. There were 381, including 249 of appendicectomy, 116 of appendicectomy with drainage, and 16 of laparotomy with drainage. There were 225 various operations for hernia, including 155 of Bassini's operation. Cholecystotomy was performed 33 times, cholecystectomy 18 times, choledochotomy 6 times, and an exploratory operation on the gall bladder 5 times. Among the operations on the bones, Lane's plating operation was performed 16 times, and Lane's plate was removed 6 times. Under the heading chest operations, resection of rib was performed 26 times, artificial pneumothorax was performed 19 times, Schede's operation was performed once, Estlander's operation once, and bronchoscopy once. Excision of the breast was performed 22 times, partial thyroidectomy 9 times, and splenectomy 3 times. Varicocele was operated on 71 times.

There were 2,824 administrations of anæsthesia, including 480 local anæsthesia and 2 spinal anæsthesia. Four patients died under anæsthesia. Unfortunately no details are given of these deaths.

Chloroform was used, either alone with ether or with ether and ethyl chloride, on 201 occasions. Somnoform was used 91 times, ethyl chloride was given by the open method 302 times, and intratracheal insufflation was utilized 4 times. In all the other cases ether alone or with ethyl chloride or nitrous oxide was used.

A table is published giving the nature of the affections treated, and the result of the treatment. The classification is an improvement on the Bertillon system. It forms a very valuable guide of the work undertaken in the hospital, and within certain limits the information in regard to case mortality is in a form that can be made use of. Enteric fever was treated 86 times, and was fatal 11 times. Syphilis was treated 40 times, and was fatal 4 times. The case mortality of diphtheria is extraordinarily high, viz., 11.7%. This is probably due to the fact that only 17 patients were treated. In the case of pulmonary and pleural tuberculosis, the information given is in itself of little value, owing to the fact that the cases are not grouped either in regard to stage of disease or in regard to the length of illness. In all 152 patients were under treatment for this form of tuberculosis, and 30 died. Of considerable interest is the fact that 14 cases of cerebral tumour of an unknown nature were under treatment. Death followed in only 4 of these cases. It would be interesting to know what the fate of the other 10 patients were, and whether a more exact diagnosis could be made before or after death. The mortality from the various affections of the heart and vessels is as usual very high. There were 94 cases of myocarditis, with 33 deaths; 53 of mitral-endocarditis, with 9 deaths; 53 of aortic disease, with 17 deaths; 9 cases of ulcerative endocarditis, with 9 deaths; 46 cases of arterio-sclerosis and aneurysm, with 16 deaths; 53 cases of intra-cerebral hæmorrhage, with 38 deaths; 31 of cerebral thrombosis, with 11 deaths; and 10 of pericarditis, with 5 deaths. Diseases of the kidney were dealt with in considerable numbers. There were 163 patients with chronic nephritis, and of these 76 were taken to the mortuary. In 20 cases the nephritis was acute or sub-acute, and was fatal in three. Pyelitis was present in 37 cases, renal calculi in 24, pyo-nephrosis in 2, hydro-nephrosis in 4, and ruptured kidney in 4.

There was a large number of malignant tumours. Among the 45 epitheliomata 12 were situated in the lips. Ten of the patients died. Only 3 cases of rodent ulcer came under treatment. No deaths occurred. There were 130 cases of carcinoma. In 37 the tumour was in the stomach. Seventeen of the patients died. In 24 the breast was affected, and all but 3 of the patients left the hospital alive. In 23 the situation was in the colon; 13 of the patients died. In 14 cases the growth was in the uterus; 2 of the patients died. There were 5 oesophageal tumours, with 3 deaths, 6 liver tumours, with 1 death; 4 prostatic tumours, with 2 deaths; while tumours of the bladder, pancreas, peritoneum, ileum, gall bladder, and abdominal cavity occurred in 1, 2 or 3 instances. In all 50 of the 130 patients died in hospital.

Twenty-six cases of sarcoma were dealt with, and 10 deaths took place. The tumours were situated in various parts of the body. There were 7 endotheliomata, with 2 deaths. In 168 cases of malignant disease X-rays or radium was applied. No details in regard to the effect of the treatment is given.

TOBACCO FUND.

We have received a further contribution from Wickepin to the Over-seas' Club Tobacco Fund, and wish to record our gratitude to Dr. H. M. Prins, Mr. O'Brien, and the members of the Wogolin Debating Society for their generous support. The gifts of tobacco and cigarettes are being greatly appreciated by the Australian boys in the trenches and elsewhere.

Amount previously acknowledged, £31 15s. 7d.; L. Maskell, Esq., £1; Sale of Tickets (Wickepin), £1; A. W. W. Smoke Social, £1; W. Jenkins, Esq., 10s. 6d.; H. Ballard, Esq., 4s.; Mrs. H. Snow, 4s.; School Children of Wickepin, 3s.; H. D. Pattison, 2s.; E. Farrelly, Esq., 2s.; E. Cox, Esq., 2s.; A. L. Johnstone, Esq., 2s.; E. Stone, Esq., 2s.; E. Garnharm, Esq., 2s.; H. H. Bibby, Esq., 1s.; A. J. Mathews, Esq., 1s.; D. Young, Esq., 1s.; S. Thomas, 1s.; Members of the Wogolin Debating Society, 18s.; Total, £37 11s. 1d.

The following notice has appeared in the Government *Gazette* of Western Australia, No. 6, dated February 4, 1916:

UNIVERSITY OF WESTERN AUSTRALIA.

Election of Members of the Senate by Convocation.

The annual election of two members of the Senate by Convocation will be held on Tuesday, 14th March, 1916, at the University Offices, Cathedral Chambers, Perth.

Nominations must be communicated to the Warden of Convocation, University Offices, Perth, under the hands of two qualified voters, not less than 28 days nor more than 42 days before the date fixed for the election.

The ballot will commence at 10 a.m. and close at 5 p.m.

S. H. FLETCHER,
Clerk of Convocation.

University Offices, Cathedral Chambers,
Perth, 15th January, 1916.

A proclamation has been issued, prohibiting, in the interests of the community, the importation into the Commonwealth of homœopathic medicines manufactured at the General Dispensary of Count Cesar Mattei, Palais Mattei, Bologna, Italy.

The Medical Journal of Australia.

SATURDAY, FEBRUARY 19, 1916.

Some Problems in School Hygiene.

On another page we publish this week a summary of the report of the School Medical Officers of Victoria. The problems that have to be dealt with in this State do not differ from those which present themselves elsewhere. The scope of the undertakings, however, has been limited by a variety of circumstances. School hygiene is a question of the expenditure of money and the application of sound theories to practice. The Education Authority is responsible for the proper condition of the school buildings, for the adequate arrangements for teaching children in favourable surroundings and for precautionary measures which may safeguard the health of the pupils. In a State which provides but a relatively small amount of money for the carrying out of these functions, some caution should be exercised in the selection of the problems to be tackled first. The number of school medical officers in Victoria is small, far too small for the school population. At the time of the issuing of the report there were four medical officers, but we learn that two of them have since volunteered for service with the Army Medical Corps. The Education Department is therefore left with but two school officers for the whole of its 160,000 school children. With so small a staff, no headway can be made. It is probable that the money question is not the only, nor even the chief obstacle to progress. It is becoming more and more difficult to obtain the services of medical practitioners for civil duties. But even when the complement of the staff was full, it was quite impossible for the work of inspection of the school buildings and of the school children to be carried out comprehensively or fully. No attempt has been made to cope with the whole school population. We venture to suggest that the Government of Victoria has practised false economy is regard to this important matter. Twenty practitioners would find plenty to do as inspectors, and the money spent on such a staff would be well invested. The Catholic Federation has applied to the Department to have medical inspection carried out in the schools under its control in certain populous areas, and the Minister has only been able to promise compliance, if the size of the staff should render this extension of the work possible.

In communities with few medical inspectors of school children, the selection of school hygienic work should be utilitarian and practical. The inspectors should devote their attention to the environments of the children and to their physical condition. Anthropometric investigations are far less important than the ordinary search for defects. If the means at the disposal of the department admit of it, an adequate system of "following-up" should be instituted, and well-trained school nurses should use all legitimate measures to induce the parents to have remedies applied by competent practitioners for the defects discovered at the inspection. The next problem demanding the careful consideration of the authority is the special care of children with defects which form gross obstructions to education. The most obvious are usually dealt with, namely, the mentally inferior, the blind, the deaf-mutes and the epileptic. Less striking barriers to mental training are, however, just as important, since the results of the measures adopted are often proportionately much better. Open-air schools for children in the pre-tubercular stages, school for myopes, classes for backward children and country classes for anæmic and convalescent children have produced results in the past, which represent a large return to the State for the expended capital. Much excellent work has been begun by many of the Education Departments in the Commonwealth, but in every case there is need for extension in the right direction. There are many pitfalls and traps. Political notoriety may not accrue from the adoption of a sound and wise programme, but if those responsible for the progress of these departments keep the interests and welfare of the children steadfastly in view, false steps and consequent failures may be avoided, and the State will see its children growing up into a healthy, happy and strong generation.

GALYL.

Substitutes for salvarsan belong to one of two classes. The difficulty of obtaining salvarsan or

neo-salvarsan at the present time has stimulated the ingenuity of chemists to produce preparations possessed of parallel pharmacological properties. The second class of substances has arisen from a desire to diminish the toxicity and to increase the parasiticidal effect. The latter substitutes have been aimed at ever since Ehrlich and Hata obtained satisfactory results in the laboratory with organic arsenic compounds. Of the more recent substitutes galyl, or tetraoxy-diphosamino-diarsenobenzene has attracted much attention. It is a synthetic preparation discovered by M. Mouneyrat, and contains 35.3% of arsenic as well as phosphorus equivalent to 7.2% of the element. It will therefore be seen that while the arsenic content is approximately equal to that of salvarsan, the amount of the metal given in a full dose of 0.5 gramme is about one half of that contained in a full dose of neo-salvarsan. Up to the present the records of results of treatment by galyl are very few in number, and some time must elapse before a final appraisement of its therapeutic value can be formed. Dr. Harold Spence has published a valuable note[1] on the clinical impressions obtained in the London Lock Hospital of 1000 intravenous injections of this substance. He admits that the results were not controlled by biological tests, and only a short time has elapsed since the injections were given Moreover, the treatment has been undertaken in such a manner that difficulty may be experienced in forming a correct estimate as to the exact effect of the galyl in the compound treatment applied. Each patient is given three full doses of galyl, and a course of mercury and iodides extending over at least two years. At the end of this time, it is proposed to discontinue the treatment, and after a rest of a few months to ascertain the result of the treatment by means of the Wassermann test.

In the absence of more direct evidence, it is of importance to note that the immediate results appear to be as satisfactory as those obtained with neo-salvarsan. Dr. Spence is of opinion that the symptoms clear up just as well with the new as with the old preparation. The large papular syphilides, which are frequently resistant to salvarsan, yield somewhat better to galyl. He points out that galyl, like salvarsan, creates in certain patients a feeling of well-being and an increase in sexual vigour. This tonic effect may be disadvantageous both to the patient and to the community. Impressions have been gained that relapses are somewhat more common after galyl than after salvarsan.

So far no instance has been recorded of undoubted arsenical poisoning after an injection of galyl, nor have any deaths occurred. Mild reactions have been observed. It must, however, be remembered that atoxyl, the arsenic anilides and various other products containing arsenic acid and amino groups, as well as salvarsan, were regarded as relatively non toxic when first introduced. The fatalities following the exhibition of salvarsan have been traced to impure water used for dissolving the preparation, to certain pathological conditions which should be regarded as contra-indications to the use of the drug, to errors of technique, and to a flooding of the body with liberated disintegration products of spirochaetes. Caution must, therefore, be exercised before a comparison is drawn between the safety of a substitute for salvarsan and the original substance. It is probable that some risk must be run, if the physician aims at a wholesale destruction of numerous disease germs in the course of a chronic or prolonged infection. Summing up the experience gained at the Lock Hospital it may be said that galyl promises to be a valuable alternative for salvarsan.

[1] *The Lancet*, December 11, 1915.

THE PROVISION OF PURE MILK.

The Health Act, 1900-11, of Queensland provides for the licensing of milk sellers, and aims at the safeguarding of the milk traffic in the interests of the public. As is the case in connexion with many other legislative acts, the clauses dealing with this matter were not applicable save in districts which might be "proclaimed" at a subsequent date. A highly important section of the Act remained inoperative from the passing of the Act to the present time. The Governor-in-Council has now declared the section (95) in force in the areas of Brisbane, South Brisbane, Hamilton, Ithaca, Toowong, Windsor, Wynnum, Balmoral, Beenleigh, Belmont, Cleveland, Coorparoo, Enoggera, Indooroopilly, Kedron, Pine, Redcliffe, Sherwood, Stephens, Taringa, Tingalpa, Toombul, Waterford and Yeerongpilly. The section in question, together with the regulations governing its provisions, enacts that all vendors of milk shall be licensed on payment of an annual fee of 10s. The license depends on the proper conduct of the business, and on the provision of suitable accommodation for the storing of milk, for the keeping of vessels and for the handling of milk. Stringent precautions

are to be enforced for the prevention of adulteration and for compelling vendors to keep all vessels and other utensils, which may come in contact with milk, in a clean and proper condition. The regulations are similar to those in force in other States. It is a surprising fact that, after the power had been gained to deal with the milk supply according to the requirements of modern hygiene, these safeguards should not have been brought into force at once, at all events in the capital city. So much depends on the proper control of the milk trade that nothing should be allowed to interfere with the enforcement of the most rigid supervision. The money spent on the inspection of dairies and milk shops is well spent, for disease and death lurks in the soiled milk-can, and yet no substitute exists for milk for the young. We trust that the heavy penalties attached to breaches of the regulations will be enforced in every instance in which a conviction is obtained.

THE PUBLIC WORKS MEDICAL FUND

The Public Works Department of New South Wales has lent its good offices in providing for the medical attendance of the workers employed on the various railway lines under construction. The result of the collaboration between the Minister and the representatives of the Railway Workers and General Labourers' Association is detailed on another page. A fund has been established with the object of enabling the men working on the construction of railways to obtain medical attendance, medicines and hospital treatment for themselves, their wives, sons under 14 years of age, and daughters under 16 years of age, as well as other dependants who reside with the workers. The arrangements differ from those obtaining in Friendly Society Lodges, in that the workers contribute 6d. a week and the Government adds a further 3d. a week, and the attendance and medicines are paid for out of this fund. The doctors willing to co-operate in the scheme will fix a uniform scale of fees for each district, more particularly a fixed fee for visits to the patient's house, and another for treatment given at the practitioner's surgery. The plan is not a new one, but the fact that it does not carry with it a death or funeral benefit or a maternity benefit renders it more practical than the undertakings of a similar nature usually are. The fund, with a 50 per cent. contribution from the Government, should be large enough to admit of reasonable fees being discharged from it. In the National Deposit Friendly Societies' scheme in England, it was necessary to limit the amount of benefit, which each contributor could claim, to the amount of his contributions. The doctors were paid the sum of 2s. 6d. per attendance at the patient's house, but even with this low fee it was often found that a member was unable to command the requisite attendance, because he had not contributed to the fund for a sufficiently long time In the present instance, the pooling system should result in an accumulation of money sufficient to cover the cost of treatment under ordinary conditions. The plan is a sport of contract practice, and is interesting, because it carries with it free choice of doctor, payment for work done and not on a capitation basis, and payment for preventive or prophylactic measures taken in the interests of the workers concerned.

A HOSPITAL DIFFICULTY.

According to the *Otago Witness* of February 6, 1916, the whole of the honorary medical staff of the Timaru Hospital has resigned under conditions which are unusual and suggestively interesting. It appears that the Hospital Board appointed a subcommittee to enquire into the economies of the storeroom. This sub-committee reported that the Matron has been somewhat careless in making entries into the store book. The honorary medical officers regarded some of the expressions contained in the report as reflections on the Matron's honesty, and they, as well as the Matron herself, demanded a full and impartial investigation of all the circumstances. The Board did not consider that this further enquiry would serve any useful purpose, and consequently refused to comply with the demand. The medical officers thereupon sent in their resignations, and at the same time invited the Inspector-General of Hospitals to visit the hospital and make a thorough investigation. The invitation was accepted, but some delay occurred, owing to other and more pressing duties. The members of the honorary medical staff felt that the interests of the patients would be better served if the matter were allowed to remain in abeyance until the enquiry, and intimated to the Board that they would wish to withdraw their resignations temporarily. The Board, however, was not to be led by the nose as easily as this, and, as a protest to the "interference" of the Inspector-General, accepted the resignations of the members of the staff. The Resident Medical Officer received instructions to conduct the hospital as best he could with the assistance of practitioners willing to assist at operations, and in the meantime the Board is endeavouring to obtain the services of a permanent Assistant Resident Medical Officer.

Judging from this account, it would seem as if a mountain had grown out of a mole-hill. The action of the Board suggests that a mistake was made in impugning the honesty of the Matron, but instead of facing the situation boldly, the Board have obviously attempted to pass the matter over lightly. The sympathetic action of the honorary medical officers was a little impulsive. It is nearly always bad policy to resign in the face of difficulties, or as an act of protest. Had they uttered their protest in another way, and sought the assistance of the Inspector-General, the patients would not have been punished more severely than the Hospital Board. The moral of the story is that in a quarrel over the honour of a woman, it is advisable to hit the right man.

The attention of members seeking hospital appointments is directed to an advertisement appearing in another part of this issue for two Resident Medical Officers in the Broken Hill and District Hospital. The opportunity for gaining experience is a good one, and the Hospital Board has determined to give applications from women practitioners favourable consideration.

Abstracts from Current Medical Literature.

SURGERY.

(61) Military Surgery.

L. Eloesser (*Journ. Amer. Med. Assoc.*, December 4, 1915) details his experience while serving as surgeon to the Reserve Lazarett IV., in Karlsruhe, in Germany. He points out that wounds from small arms were rare, whereas those caused by shells and shrapnel were common. The small calibre bullet causes a wound, which varies according to the type of bullet and the part struck. It does not seem to make much difference whether the bullets are pointed, like the English, French or German, or whether they are more snubbed, like the Russian. What does make the difference is whether the points are smooth, or whether they are notched, dented, hollowed out or deformed. In the latter case, the bullet no longer pierces but rends and tears with explosive violence. At times a bullet may become deformed by striking a button, a stone or a wire fence, and they may act like a dum-dum. When the centre of gravity is near the rear end, the bullet often tends to turn broad-side or even to strike butt-end foremost. He comes to the conclusion that a bullet with the anterior third of its core made of aluminium and the remaining two-thirds of lead, produces the worst wound. Many of the head injuries seen at the Base Hospital were tangential. The penetrating or perforating wounds usually kill the men outright. A primary trephining for tangential wounds is often undertaken in the field hospitals. When the patients arrive at the Base it is necessary to examine fractured skull with X-rays. Bullets or splinters from the internal lamina are frequently found when none were suspected. Late abscesses are not uncommon, and may give rise to considerable trouble. In dealing with wounds of the extremities, he points out that nerves and blood vessels do not evade modern bullets. The damage is usually greater when the vessels and nerves are on the stretch. The track of the bullet is usually surrounded by a hard infiltrate. The muscles show extensive hæmorrhage and necrosis. After the clot and infiltrate shrink, the nerves become strangulated, and pareses, with excruciating pain, develope. The treatment of this condition is to dissect the nerve out of the scar tissue, and separate the various nerve tracts.

Turning to the question of wounds from shells and other projectiles, he points out that at the beginning of the war shells burst into large, irregular, polyhedral chunks. Later shells burst into smaller fragments, which were often full of little blow holes. These fragments carried shreds of clothing and various forms of dirt into the wound. The American manufactured shell, being made of tough steel, burst into jagged slivers, with saw edges. Every wound from a shell is infected. The infections are said to have become worse as the war progressed, possibly because the uniforms were becoming dirtier and the ground more impregnated with decaying cadavers. Tetanus, on the other hand, had become rare. These wounds had to be treated actively. They were frequently deceptive. For the first two or three days the wounds remained reactionless, and then the inflammation broke loose, and phlegmon ran wild. He regards gas phlegmons as primarily phlegmons with secondary gangrene. In one kind the whole limb is greatly swollen and tender, dusky brownish-yellow and tympanitic on percussion. The muscle underneath is dry, and may be covered with a greenish, fibrinous material. The exudate from the wound has an ammoniacal smell. The muscles are often greenish in colour, and a watery, stinking pus tracks up and down the limb. Later, if all goes well, the muscles, which were previously tense to bursting, become soft and black, but still full of gas. A day later they begin to slough. A large amount of slough comes from the wound, green ones from the muscles and fascia, mixed with bright ochre pieces of unknown origin and foul pus. The phlegmons should be laid wide open, so that all the affected parts are visible. There is no time to make small incisions. The whole process developes too rapidly, and, unless something is done quickly, gangrene sets in and the patient dies. It is necessary at times to cut and ligature the main vein, to prevent the pus travelling up. The most virulent phlegmons are those of the lower extremities. The author states that it is evidently a myth that ammunition has been poisoned, since these ghastly wounds are far less common in the upper than in the lower extremities. He deals briefly with the question of amputation.

(62) Paget's Disease.

G. Jefferson gives full details of a case of osteitis deformans in a man aged 67, and discusses the pathology of the disease (*Brit. Journ. of Surg.*, October, 1915). The patient was originally a man of giant stature and great strength. His height had decreased by over three inches, his legs were bowed, his head had become appreciably larger, the lower jaw was slightly prognathous, the spine was curved, and he had become markedly weaker. The bone changes are described with the aid of radiographs. On the basis of his observations and those of other clinicians and pathologists, he has come to the conclusion that Paget's disease is probably not an inflammatory process, but a disturbance of the internal secretions which control the calcium metabolism. The glands affected would therefore be the thyroid and parathyroid. In the early stages of the disease there is a general decalcification. An irregular, bony proliferation occurs. The rarefying process brings the affection into line with osteomyelitis fibrosa and to a limited extent with osteomalacia. The disease may progress in various ways. Certain bones are more severely affected than others. It may be impossible to diagnose the disease when only one bone is affected. X-rays at times reveal early stages in bones which present no clinical manifestations. In the later stages bone salts are deposited in large amounts; calcium, magnesium and phosphorus are retained. The stage of softening may be prolonged and gradual, and deformities may be produced in all bones, including those of the skull. The variety of bone change described is explained by the morphological differences met with in the different stages of the disease. Extracts of endocrinic glands, given by the mouth, may yield beneficial results, although once deformities have developed they will persist, even after the disease has been arrested.

(63) Partial Occlusion in the Treatment of Aneurysm.

E. Martin (*Surg., Gynaec. and Obstet.*, November, 1915) records a short series of cases of aneurysm of the internal carotid and ophthalmic artery, which were dealt with by ligature of the common carotid. The first patient had a traumatic aneurysm, evidenced by pulsation of the orbital content and a subjective bruit. The right common carotid was ligatured. This led to a disappearance of the signs and a permanent cure. In the second case the patient showed a high blood pressure, arterio-sclerosis, inadequate renal function and a bilateral, pulsating exophthalmos, with everted lids, and thrill and bruit. Cure followed ligature of the right common carotid. The third patient complained of facial palsy and deafness on the left side, with anosmia and a throbbing, rhythmic buzzing in the head. The left eye was proptosed. The left common carotid was ligatured, and cure resulted. Trauma is the most common cause of pulsation exophthalmos. Failure of vision occurs, but symptoms of intracranial hypertension are absent. The author deals with errors of diagnosis, which he shows to be common. He recalls a case of Frazier, of a boy, in whom cure occurred after a repeated trauma, the left internal carotid having been ligatured previously. Ligature of the carotid is said to have been successful in 66% of the reported cases. The ligature material must be absorbent, in order that it may not be discharged into the lumen of the vessel. Pulsating exophthalmos due to arteriovenous aneurysm should be carried out by occluding the vessel up to the point of stopping the bruit and pulsation, by ligature of one or more of the dilated orbital vessels, and by starvation diet, guarding against acidosis.

(64) Chest Complications Among the Wounded.

Kenneth Taylor has undertaken an analysis of all the autopsies carried

out in the American Hospital in Paris, with the object of ascertaining the frequency of pulmonary and pleural complications in fatal cases of wounds (*Annals of Surgery*, November, 1915). There were 51 reports, in which an examination of the chest was made. In 27 cases there was plastic, fibrinous pleurisy, in 15 broncho-pneumonia, in 8 pleurisy with effusion, in 6 lobar pneumonia, in 4 hæmothorax, in 2 empyema, in 2 passive congestion, in 1 pneumothorax and in 9 negative findings. Many of these conditions coexisted in one patient. In 10 cases of penetrating wounds of the brain the lungs were unaffected three times, in 17 wounds of the thigh they were unaffected once, in 4 penetrating wounds of the abdomen they were unaffected once, in 6 wounds of the extremities they were unaffected twice, and in 4 multiple wounds they were unaffected twice. The lungs were affected in all five cases of penetrating wounds of the chest, and four of transverse lesions of the cord. In considering the high incidence of lung conditions in wounds of the thigh, he suggests that adherent pleura may develope as a result of posture, as well as of general intoxication. He emphasizes the fact that all the patients were between 20 and 40 years of age, and were men who had presumably passed a medical examination.

GYNÆCOLOGY AND OBSTETRICS.

(65) Abortion.

E. C. Montgomery (*Journ. Americ. Med. Assoc.*, October 6, 1915), after protesting against the popular desire for and practice of prevention, as well as the interference with conception when once established, and its proposed legislation by some members of the profession, proceeds to enumerate the causes and the treatment of threatened, inevitable and incomplete abortion. The main causes, he states, are over-exertion, infection or injury, but most frequently the administration of drugs and the application of mechanical measures. Recurrence of undesired abortion is frequently due to syphilis, but more often to some antecedent uterine disease or injury. Threatened abortion is best treated by complete rest, the exclusion of all causes of excitement, the administration of an opiate, preferably by suppository or hypodermically, an easily digested and nutritious diet, the administration of laxatives and the avoidance of remedies such as ergot, cotton root, quinine and strychnine, which increase the uterine irritability. The recurrence of undesired abortion should be treated by prophylactic measures. The curette should be employed in endometritis. Surgical treatment of lacerations, of extensive abrasions, of eversion of the mucosa, and of extensive involvement of the racemose glands of the cervix should be regarded as indicated. Retrodisplacements and prolapses should be corrected. Potassium iodide should be given in all specific and also in non-specific cases. The drug diminishes the irritability of the uterine mucosa. The treatment of inevitable abortion should be the early aseptic evacuation of the uterus. In the treatment of incomplete abortion, he is of opinion that the curette is used too frequently, and he advises against it, especially in septic cases, in which nature's barrier against the infection is removed. He thinks that, as a rule, nature can be trusted to complete the process efficiently, and that medical treatment is indicated. In the discussion that followed the delivery of his paper, some speakers agreed and some strongly disagreed with his opinion regarding the use of the curette in cases of incomplete abortion.

(66) Abuse of Pituitary Extract.

G. C. Mosher (*Surg., Gynaec. and Obstet.*, January, 1916) gives a warning against the indiscriminate use of pituitary extract in labour. He admits its great usefulness in the multipara, whose case has been carried to the perineal stage of labour, when stasis results. A dose of pituitary in such a case will overcome the inertia and avoid the employment of instruments. On the other hand, this drug has no place in normal labour, nor in a case where there is abnormality in presentation, nor where there is pelvic dystocia. In support of the foregoing, he cites a case of transverse presentation in which repeated doses of pituitrin had been given. The patient died, and the uterus was found to be ruptured, with the head and arm of the fœtus extruding through the rent. He asserts that pituitrin should not on any account be given early in labour, and instances many cases of death and asphyxiation of the child and excessive *post partum* hæmorrhage, where the drug had been administered too early in labour. He concludes by stating that the sphere of the drug is limited, and is not applicable in primiparæ, nor in dystocia, nor any case of labour, except where a delay is met at the pelvic outlet, especially in multipara. To the mother who has already had the test of labour, with an inability to deliver a head already on the perineum, it is a boon. To a primipara in the first stage of labour it is a menace.

(67) Pituitrin in Obstetrics.

Bubis advocates the use of pituitrin in small doses of 2 or 3 minims during labour (*Surg., Gynaecol. and Obstet.*, November, 1915). He has given up using large doses like 1 c.cm., on account of the severe reaction characterized by excessive, continuous and almost tetanus-like bearing-down labour pains, the loss of control over the mother, her intense suffering, and the dangers to herself and the infant. He was induced by a number of bad results to try small doses, and he has found the doses mentioned above act well in the various stages of labour. One injection of these doses sufficed in the case of 29 primiparæ and 67 multiparæ. The infants varied in weight from 12lbs. In 13 cases, including 5 of primiparæ, 2 to 4 doses were given at intervals of ½ to ¾ hour with satisfactory results. He appends details of several complicated and abnormal labours in which he used small doses of pituitrin with uniformly good results. He recommends the biceps as the best site for intramuscular injection of the drug. He concludes by stating that while the mortality of the infants and the morbidity of the mothers are much greater when large doses of pituitrin are given, the drug given in small doses acts satisfactorily and without increasing the risk to either. It yielded him good results in breech presentations, and also in twin and dry labour cases.

(68) Heat in Cancer of the Uterus.

J. F. Percy (*Surg., Gynaec. and Obstet.*, January, 1916) gives his experiences of the treatment of carcinoma of the uterus by heat. He has employed the method with success for a period of three years, mainly in inoperable cases. He states that a mass of cancer is destroyed when the temperature is raised to 113° F. (45° C.) and maintained for ten minutes. He emphasizes the fact that the correct application of heat in uterine cancer is not a cautery operation, as this merely carbonizes the surface and prevents the dissemination of heat to the deeper, injected tissue. He claims that by administering heat by hot iron the discharge is stopped, as well as pain and hæmorrhage, that it has an immediate beneficial effect on the general health of the patient and prevents the rapid growth of metastatic tumours. He recommends for the metastatic growths massive doses of X-rays from the Coolidge tube. He lays stress on the fact that handling and manipulation of a tumour disseminates the cancer cells, and that cutting with a cold steel knife merely stimulates into activity the cancer growth. Wherever cutting operations are performed they should be done with a hot knife, so as to kill the adjacent cancer cells. His technique consists of opening the abdomen, passing the heating head through the utero-cervical junction to the fundus of the uterus, keeping it in one position until the whole mass contiguous to the heating iron is made so hot that it cannot be held in the surgeon's hand when encased in a medium-weight rubber glove. A low degree of heat, and not a cauterizing temperature, should be used, as the latter prevents dissemination of the heat. The heat should be kept applied until all the structures that were fixed at the beginning of the application are freely moveable. He concludes by citing one case of a woman with an inoperable case, who lived without recurrence for seven years after the application of a heat process, and of another patient who was alive four years and six months after the same treatment.

British Medical Association News.

ANNUAL MEETING.

The Annual Meeting of the Tasmanian Branch was held at Hobart on February 8, 1916, Dr. R. G. Scott, the President, in the chair.

Dr. Scott gave a short review of the work done in 1915, and proceeded to introduce Dr. G. E. Clemons as the President for 1916. Dr. Clemons, on taking the chair, thanked the members for the honour they had done him.

The following office-bearers were elected.—

President-Elect and Vice-President: Dr. G. M. Anderson.
Honorary Secretary and Treasurer: Dr. A. R. Hayward.
Honorary Auditor: Dr. E. Brettingham Moore.
Delegates to the Federal Committee: Dr. G. Sprott and Dr. G. E. Clemons.

On the motion of Dr. A. H. Clarke, it was unanimously resolved that a cable be sent to Colonel W. W. Giblin, C.B., conveying the congratulations of the Branch to him on the honour conferred upon him.

MEDICO-POLITICAL.

A meeting of the Queensland Branch was held at the B.M.A. Rooms, Adelaide Street, Brisbane, on February 4, 1916, Dr. W. N. Robertson (the President) in the chair.

Dr. E. S. Jackson, who had recently returned from Egypt, read notes on "Some Aspects of Immorality and its Results in Egypt." The communication gave rise to a spirited debate, and comment was particularly directed to the wisdom of advising the use of preventives by regimental medical officers, and to the efficacy of such measures.

Dr. W. N. Robertson (the President) made sympathetic reference to the late Dr. J. D. Buchanan, whose death in Cairo has recently been announced. At the time of his departure for the front, he was Honorary Treasurer of the Branch. He was always a keen supporter of the British Medical Association, and had worked hard and constantly for the good of the Branch. It was resolved that a letter be addressed by the Council to Mrs. J. J. Buchanan, the mother of Dr. Buchanan, expressing, on behalf of the members of the Branch, their deep sense of loss and their sympathy with her in her bereavement.

Dr. Taylor moved, and Dr. McKenna seconded, a motion to the effect that the Queensland Branch approves of cremation. Cards were handed round by Dr. Taylor, to be signed by those in favour of cremation, and returned to him.

The following have been nominated for election to the New South Wales Branch:—

Dr. Douglas Wood, Wellington, New South Wales.
Dr. Hugh E. Kirkland, of the No. 4 Australian General Hospital, Randwick.

DINNER TO THE HON. J. L. BEESTON, M.L.C.

The members of the Central Northern Medical Association entertained Col. J. L. Beeston, C.M.G., M.L.C., at dinner at the Newcastle Club, Newcastle, on February 8, 1916, and welcomed him back after an absence of more than 12 months' service with the Australian Army Medical Corps in Egypt, the Gallipoli Peninsula, Lemnos, and elsewhere. Among the hosts were Dr. E. Ken Herring, Dr. R. U. Russell, Dr. R. J. Nixon, Dr. A. A. King, Dr. A. E. Harker, Dr. J. P. Hocken, Dr. John Harris, Dr. W. J. R. Nickson, Dr. J. M. Gibbes, Dr. J. R. Leslie, Dr. A. J. C. Crawley, Dr. W. R. Beeston, Dr. Ulick Bourke, Dr. H. G. Allen, and Dr. W. N. Horsfall. The guests included Dr. George Armstrong and Dr. R. H. Todd, President and Honorary Secretary of the New South Wales Branch of the British Medical Association respectively. Dr. E. Ken Herring, President of the Central Northern Medical Association, supported by Dr. W. J. R. Nickson, the Vice-President, and Dr. H. G. Allen, the Honorary Secretary, received the guest of the evening, and in proposing the toast in his honour, referred to the great affection and esteem in which he had always been held. He congratulated him on the good work he had done for his country, and on the great distinction he had won for himself and his profession.

Colonel Beeston, in his response, led his hearers with him through many thrilling incidents connected with the Anzac campaign and the work of the 4th Field Ambulance, of which he had been in charge.

A dinner was given by the Brisbane and Ipswich members of the Queensland Branch of the British Medical Association to the country medical men at present on military duty in Brisbane at the Johnsonian Club on February 4, 1916.

Among those present were: Dr. Stuart, of Rockhampton; Dr. Patterson, of Ipswich; Dr. Savage, of Byron Bay; Dr. W. N. Robertson, Dr. Lucius MacDonnell, Dr. A. B. Carvosso, Dr. E. Culpin, Dr. E. D. Ahern, Dr. C. A. Thelander, Dr. E. S. Jackson, Dr. W. F. Taylor, Dr. G. L'Estrange, Dr. K. F. C. Brünnich, Dr. P. J. Kelly, Dr. A. M. McIntosh, Dr. T. R. McKenna, and Dr. T. H. R. Mathewson, of Brisbane; Dr. J. A. Cameron and Dr. J. V. J. Duhig, of Ipswich.

After Dr. Robertson, the President, had proposed "The King," Dr. Taylor welcomed the country practitioners to Brisbane, and assured them that their sacrifice in relinquishing their work to take up military duty in Brisbane would be heartily appreciated.

Dr. Stuart, replying for the visitors, wished in the first place to thank the Council for having elected him an Honorary Vice-President of the Queensland Branch for 1916. He regarded it as a compliment to the Local Association in Rockhampton, and assured the Council that his colleagues appreciated the honour which had been conferred upon him. Referring to his experiences at Enoggera during the recent tropical downpour, he said that he came to Brisbane to learn something of military duty; his recent experience was something in the way of an education. He thanked his hosts for their kindly hospitality.

Dr. Lucius McDonnell, who had just returned from Gallipoli, gave a short account of his experiences of active service. He hoped to amplify this account at a later date in a paper to be read before the Branch.

Medical Societies.

(Affiliated with the British Medical Association).

NORTHERN DISTRICT MEDICAL ASSOCIATION.

The Annual Meeting of the Northern District Medical Association was held on January 19, 1916, at Tattersall's Hotel, Armidale, New South Wales, Dr. H. L. Harris, the President, in the chair.

Arising out of a communication from the Honorary Secretary of the New South Wales Branch, Dr. Ritchie moved:—

That the uniform rules for local associations be adopted, with the exception of rule 16.

He pointed out that it would be impracticable to carry out a complicated scheme such as that suggested by the Council for the election of office-bearers and the Committee in the extensive district of the Northern District Medical Association. Dr. Corfe seconded the motion. In the course of the discussion it was pointed out that many of the members did not attend any of the meetings, and would probably take but little interest in the nomination and balloting for the Office-bearers. The motion was carried.

In reference to a letter addressed by the Honorary Secretary of the Branch to the Secretary of the Association, dealing with War Emergency Organization, Dr. W. Harris moved:—

That if any doctor, having patients, goes to the war, 50% of the Lodge capitation fees shall be handed to the remaining doctor who attends his Lodge patients.

The motion was seconded by Dr. Ritchie, and carried.

In regard to private practice, it was agreed that medical men leaving the district for the purpose of joining the forces on active service should be recommended to make arrangements with local practitioners. The members of the Association expected that local practitioners would do everything in their power to restore patients to their original medical attendant on his return from active service.

The Treasurer's report for 1915 was read and adopted.

Dr. Douglas moved and Dr. W. Harris seconded a resolution to the effect:—

That the membership of practitioners on active service shall remain effective, and that no subscription shall be due from them for the period of their service.

The motion was carried.

It was moved by Dr. Douglas, seconded by Dr. McKee, and resolved:—

That until the termination of the war, the Northern District Medical Association disapproves of the setting up in practice of a medical man in any town from which members have gone to the war, without the sanction of the Northern District Medical Association.

Dr. Hittman, of Wee Waa, and Dr. Balls, of Muswellbrook, were elected members of the Association.

The following were elected members and officers of the Committee for the year 1916:—

President: Dr. H. L. Harris.

Vice-President: Dr. W. Harris.

Honorary Secretary and Treasurer: Dr. Buckley.

Members of the Committee: Drs. Ritchie, Murray, McKee, Kinross, Stuckey, Vernon, Wrigley, J. McKenzie, Park, Farrell, McKell, Scott, Stanley, Rogers, Birch, Newman, Riolo, and Middleton.

Honorary Auditor: Dr. Sexton.

Delegate: Dr. Ritchie, of Macquarie Street, Sydney.

Dr. W. Ritchie, of Armidale, demonstrated some interesting pathological specimens.

Dr. Scott read a paper on "A Case of Pneumonia complicated by Jaundice."

Dr. Corfe read a paper on "An Unusual Case of Cirrhosis of the Liver in a Young Girl."

Dr. Ritchie read notes on several gynæcological cases.

It was reported that 25% of the members were absent on active service. The list is as follows:——

Dr. Coleman, of Denman; Dr. Lindeman, of Gunnedah; Dr. Stuart Cross, of Moree, Dr. A. S. Darvall Barton, of Coonabarabran; Dr. Hutchinson, of Wee Wee; Dr. Colman Woods, of Moree; Dr. Matthews, of Warialda; Dr. Ellis, of Manilla; Dr. Campbell Smith, of Armidale; Dr. A. McKenzie, of Glen Innes; Dr. Snow, of Tamworth; Dr. Douglas, of Tamworth.

Public Health.

INFECTIVE DISEASES IN QUEENSLAND.

The following notifications have been received by the Department of Public Health, Queensland, during the week ending February 5, 1916:—

Disease.	No. of Cases.
Pulmonary Tuberculosis	6
Enteric Fever	65
Diphtheria	23
Varicella	1
Puerperal Fever	2
Cerebro-Spinal Meningitis	1
Scarlatina	6
Erysipelas	1
Malaria	1
Total	106

THE HEALTH OF VICTORIA.

The following notifications have been received by the Department of Public Health, Victoria, during the week ending February 6, 1916:—

	Metropolitan. Cs.	Dths.	Rest of State. Cs.	Dths.	Total. Cs.	Dths.
Diphtheria	33	1	17	1	50	2
Scarlatina	12	0	4	0	16	0
Enteric Fever	2	1	41	1	43	2
Pulmonary Tuberculosis	15	4	12	4	27	8

Only one case of epidemic cerebro-spinal meningitis has been reported during the week ending February 6, 1916. This was a civil case in a rural district.

INFECTIVE DISEASES IN WESTERN AUSTRALIA.

The following notifications have been received by the Department of Public Health, Western Australia, during the week ending January 29, 1916:—

District.	Enteric Fever. Cases.	Diphtheria. Cases.	Phthisis. Cases.	Erysipelas. Cases.
Fremantle	—	1	—	—
Cottesloe Beach	—	1	—	1
Subiaco	3	—	—	—
Perth	6	2	1	—
Maylands	1	—	—	—
Bayswater	1	—	—	—
Meekatharra	1	—	—	—
Midland Junction	2	—	—	—
Tammin	2	—	—	—
Victoria Park	1	—	1	—
Esperance	—	2	—	—
Totâgin	—	—	1	—
Kalgoorlie	—	1	—	—
Gwalia	1	—	—	—
Coolgardie	—	1	—	—
Chidlow's Well	—	1	—	—
Yorkarine	2	—	—	—
Maddington	—	2	—	—
Meenaar	2	—	—	—
Osborne Park	—	1	—	—
Spearwood	—	—	1	—
Blackboy Camp	1	—	—	—
Geraldton	—	—	3	—
Swan View	—	—	1	—
Thojoniup	1	—	—	—
Greenbushes	1	—	—	1
Holyoake	1	—	—	—
Bellevue	1	—	—	—
Nannup	—	—	1	—
Collie	1	—	—	—
Totals	28	12	9	2

SMALL-POX IN NEW SOUTH WALES.

The following cases of small-pox have been reported to the Department of Public Health, New South Wales, during the week ending February 13, 1916:—

	Cases.
Sydney (infected at Newcastle)	1
Newcastle	4
Total	5

During the last two months, seven cases of cerebro-spinal meningitis have been admitted into the Adelaide Hospital. These cases were all admitted between December 26, 1915, and January 16, 1916. In the week ending December 19, 1915, two patients died of the disease. No further deaths took place until the week ending January 16, 1916, when two patients died. One patient died in the following week, and two patients died in the first week of February.

SCHOOL HYGIENE IN VICTORIA.

The Report of the Minister of Public Instruction of Victoria for the year 1914-15 was issued in November, and has now been presented to both Houses of Parliament, and published. The Minister devotes a chapter of his report to school hygiene and physical development, and in the appendices attached to the report, the school medical officers deal with medical inspection and school hygiene, the developement of the child, the aborigines in Victoria, anthropometric measurements of teachers and immigrants, goitre in Victoria, and a new series of intelligence tests.

Medical Inspection.

The Minister points out that the work of medical inspection of school children has progressed steadily, although he finds that the number of children examined in the elementary schools is slightly less than that examined in the preceding year. On the other hand, candidates for the teaching service have been subjected to medical examin-

ation, and a certain number of sick-leave teachers have been seen. The scheme of examination comprises the inspection of 25,000 children every two years. It is proposed to spread the work over three yearly periods, and to raise the school population dealt with to about 40,000. When this is done there will be about 140,000 children, who are not inspected by the medical officers.

He makes special reference to the importance of seeking physical defects in children. The permanence of these disabilities is evidenced in the fact that over 40% of the volunteers have been rejected for military service at the medical examination. He continues as follows:—

> In spite of the pressure of events and the inevitable disturbance, financial and otherwise, created by the war, no time seems more appropriate than the present for the extension of medical inspection, if we are to utilize or prevent these bad effects on the children of the nation, who form the next generation of Australians and on whose shoulders the aftermath of the war must be borne.

The subjects dealt with in general terms by the Minister are analysed in greater detail in the appendices.

The children in attendance at 22 elementary schools, including 7 metropolitan, 10 country centres, 2 seaside and 3 rural schools, have been subjected to inspection during the year. This class embraces a total of 9,671 children and 17 in a special open-air school. The number of high schools visited was 13, including two metropolitan schools, and 2,264 pupils were examined. The total number of children under observation by the medical officers is consequently 11,952. The net enrolment at elementary schools was 218,427 whereas the average attendance was only 160,885. It is estimated that 216,035 children of school age have been under instruction during the course of the year. The School Medical Officers, Drs. Harvey Sutton, J. S. Greig, Eileen Fitzgerald and C. J. Simpson, point out that relatively the schools in country towns receive more attention than those in the metropolis, chiefly because all high schools are visited once every two years, and the corresponding elementary schools in the high school centre are visited at the same time. It is said that 2,000 children in rural schools are subjected to examination, and that reports concerning these children are furnished to the medical offices by the bush nurse. No information is given from which we can learn what part is played by the bush nurse in the inspection. It is to be hoped that too much reliance is not placed on her powers of diagnosis.

The Medical Officers point out that it is impossible to expect three medical officers to deal with a larger number of children than those already examined. The appointment of the fourth medical officer was made for the purpose of examining candidates for the positions of school teachers. They referred to the fact that in New South Wales 12 full time medical officers are employed for inspection. Each medical officer deals with about 4,000 children in addition to other duties, such as lecturing and the like.

Physical Defects in School Children.

The total number of children examined in the metropolitan schools was 4,434, 2,327 being boys and 2,107 being girls. Defects of vision were discovered in 9.5% of the boys and 9.6% of the girls. The frequency of visual defects was less in the metropolis than elsewhere in the State. Defects of hearing were present in 10.1% of boys and 7.7% of girls. This rate is higher than the average for the whole State. Defects of the nose and throat were met with in 14.3% of the boys and 10.6% of the girls. Dental defects were present in 52.9% of the boys and 51.2% of the girls. Defects of the hair were seen in 1.4% of the boys and 21.4% of the girls. Lateral curvature of the spine was met with in 0.1% of boys and girls. Affections of the heart were present in 0.7% of the boys and 0.7% of the girls. Anæmia was diagnosed in 3.1% of boys and 3.8% of girls. Skin affections were present in 1.1% of boys and 0.7% of girls. Hernia was present in 0.5% of the boys and 0.2% of the girls. The country centre schools contained 2,275 boys and 2,366 girls, making a total of 4,641. These children are subdivided into those who have been examined for the first time and those who have been examined previously. The frequency of the defects is given in the following for each class, the first figure representing the percentage of the boys revisited, the second the boys examined for the first time, the third the girls revisited, and the fourth the girls examined for the first time. Defects of vision: 10.5%, 12.6%, 7.3%, and 9.9%. Defects of hearing: 8.0%, 16.9%, 5.3% and 6.8%. Defects of nose and throat: 15.7%, 23.2%, 11.1% and 12.8%. Dental defects: 52.5%, 55.0%, 53.7% and 60.9%. Defects of hair: 0.9%, 2.2%, 12.6% and 26.3%. Lateral curvature of the spine: 0.1%, 0.7%, 0.05% and 0.2%. Affections of the heart: 0.5%, 0.5%, 0.4% and 1.2%. Anæmia: 1.7%, 3.6%, 1.3% and 2.2%. Defects of skin: 0.8%, 1.9%, 0.5% and 0.2%. Hernia: 1.2% and 1%. None of the girls were suffering from hernia.

At the seaside schools 12.1% of the boys and 10.6% of the girls were suffering from visual defects. Defects of hearing were present in 6.4% of the boys and 6.5% of the girls. Defects of the nose and throat were present in 13.2% of the boys and 10.3% of the girls. Dental defects were discovered in 58.9% of the boys and 53.6% of the girls. The hair was not satisfactory in 0.4% of the girls and 16% of the girls. Heart affections were present in 0.4% of the boys and 3.8% of the girls. Of the boys 1.1% were anæmic and 0.8% of the girls. Skin defects were present in 0.8% of both boys and girls. Hernia was present in 0.8% of the boys.

In regard to anæmia, the medical officers point out that the pallor is frequently masked by a flush on the cheek due to excitement. They have formed the opinion that it is unwise to withdraw a sample of blood in the case of school children for the purpose of making an estimation of the hæmaglobin content. They maintain that careful observation suffices to arrive at a correct conclusion. In regard to cause, they attribute the severer forms to overcrowding as the chief, if not the sole cause. In attempting to demonstrate that the anæmia is not necessarily or even usually associated with malnutrition, they quote figures collected at Brunswick. Five hundred girls were examined. Marked anæmia was found in 5%, and mild anæmia in 18%. Malnutrition was marked in 8% and slight in 18%. They then proceed to state that:—

> Of the anæmic, 5½% were below standard in nutrition; 10½% normal; 7.7% above standard nutrition.

It is possible that the contention is justified. It would appear, however, that the actual numbers referred to must have been 28, *i.e.*, 24.3% below the standard, 52, *i.e.*, 45.1% normal, and 35, *i.e.*, 30.4% above the standard of nutrition. No information is given whether the 25 markedly anæmic girls were included in the 28 markedly undernournished girls.

A particularly interesting chapter in the work is that dealing with a new series of intelligence tests devised by Mr. S. D. Porteus, the head teacher at the school for Mental Defectives at Fitzroy. The results obtained by these tests coincide more or less with those obtained by the Binet test. The medical officers point out that they approximate more than the latter to the sociological definition of the Royal Commission "unable from mental defect occurring at or soon after birth . . . to conduct his affairs with ordinary prudence." The tests aim at a measurement of the capacity of prudence, of foresight, of general mental alertness, and of the power to profit by experience. The tests consist of a series of maze diagrams arranged for children of different ages from 3 to 13. The first three are figures of diamond, star, and cross shape, and the child is required to draw a pencil line between the two circumference lines. The tendency in unobservant or defective children is to cut across the corners. In the other tests the child is required to find its way out of the maze starting from the centre. Two trials are allowed, save in the last two, in which three trials are allowed.

Goître appears to be common in certain localities, more particularly in Gippsland. The Medical Officers show that in this instance the cause is not a particular mineral constituent in the drinking water. Two thousand girls between the ages of 9 and 14 were examined at the State schools in Bendigo, Ararat, Ballarat, Geelong, Warrnambool, Clifton Hill, Collingwood, and Abbotsford. Enlarged thyroid glands were found in 11. On the other hand, 126 girls at the State school at Bairnsdale were examined, and 14 were found to have goître. At the Bairnsdale High School 12 girls out of 19 examined had goitres. Definite enlargement of the thyroid was discovered in 16 out of 30 girls at the Sale High School. At Warragul High School 11 out of 30 girls had goitres. Of 300 junior teachers about 20 years

of age, 194 had been examined in the high school. Goitre was discovered in 26 of them. Of the remaining 109, 13 had goitre.

Anthropology.

Investigations were undertaken by the officers of the Department assisted by the Government Statist and his assistant in regard to the characters, physical and mental, of the aborigines in the State, and a second investigation was undertaken dealing with some of the physical characters of the teachers and also of immigrants.

The aboriginal has straight intensely black hair, his skin is a deep brownish black, with almost a sooty finish, and his eyes a deep dark brown, giving a rather dull effect. The racial odour is very distinct, and is often intensified by their unhygienic habits. He is imitative, and a close observer of nature. Few aborigines know their own ages, or can count correctly. Their power of imitation leads them to adopt the vices of the white man. Association with the lower types of white men have rendered their morals unstable. In regard to tuberculosis, it is stated that the aboriginal became an easy prey to this disease as soon as he was turned into a town dweller. The majority of them die of tuberculosis or respiratory diseases. Infectious diseases and cancer are common causes of death, while bronchitis and diarrhœa affect infants more frequently than other pathological conditions. The Medical Officers publish a table giving the height, chest and cranial measurements for individuals of both sexes up to the age of 17 years. The number of children examined, however, is too small to justify the establishment of age group standards or average. Measurements were conducted in a number of adults, and it was found that the average height of males was 66.25 inches. Only one woman was measured; her height was 62.88 inches.

For five years the School Medical Officers have acted as medical officers and lecturers in hygiene to various physical training and swimming schools. These schools are held during summer vacations at the seaside. Many of the teachers live under canvas for a time. Records were taken of the male teachers on entrance into the camp. The ages ranged from 18 to 56. The average height was 5 feet 8 inches, and the average weight 10 stone 6 pounds. The former corresponds to the average height of Anglo-Saxons, but the latter is rather below the average weight. The average minimum depth of chest was 189mm.; on full expansion this was increased by 32mm. The average lateral diameter was 258mm, and the expansion a further 24mm. The measurements taken at the end of the period indicated that with practice and training the expansion of the chest increased. The maximum cranial length, breadth, and height were 193mm., 151mm., and 141mm. respectively. The cranial index was therefore above average. The grip recorded on the spring dynamometer was on the average 289 lbs.

The measurements for women were as follows:—Average height, 5 feet 3 inches; average weight, 8 stone 9 pounds; average antero-posterior diameter of chest, 167mm.; average increase on full expansion, 20mm.; average lateral diameter of uninflated chest, 220mm.; and of inflated chest 26mm. more.

Some important and interesting information is given in regard to the type of immigrants to Australia since the year 1851. An analysis is made of the conditions obtaining in regard to 214 immigrants, presumably in the year dealt with in the report. Of these 164 were English, 39 were Scotch, 1 was Welsh, 1 Irish, 3 Jewish, 3 German, 1 Spanish, and 2 Canadian. These individuals belonged to 168 families. The majority of the breadwinners were foundry workers and men in other industrial employment.

Over 50% of the children born in the United Kingdom were blue-eyed, while neutral and brown eyes were almost equally represented among the remainder. The light-eyed formed a disproportionately large share of immigrants, seeing that they only represent 25% of the population of the United Kingdom. It is stated that blue eyes preponderate in rural districts, whereas persons with brown eyes are attracted more to centres of population.

The frequency of hypoplasia of the teeth in immigrant children is dealt with in the report. Dr. Harvey Sutton has analysed this subject minutely in a very able paper published in *The Medical Journal of Australia* of October 30, 1915, p. 412 *et seq.*

The anthropometric records of the immigrant children born in the United Kingdom and attending State schools is appended in a special table. In a separate table comparisons are given with children of Australian parents and with children of other parents.

CONSTITUTION OF THE PUBLIC WORKS MEDICAL FUND AS AGREED UPON BY THE MINISTER FOR PUBLIC WORKS AND THE RAILWAY WORKERS AND GENERAL LABOURERS' ASSOCIATION.

1. There shall be a fund to be called the Public Works Medical Fund, and which shall be raised in manner hereinafter provided.

2. The said Fund shall be vested in a body of three (3) Trustees, of whom shall be nominated from time to time by the Minister for Public Works and two shall be appointed from time to time by the Executive Authority of the Union having on its roll of members seventy-five per cent. or more of the men engaged on public works to which the Fund applies.

3. The Minister's representative shall be Chairman of the Trust.

4. The Fund shall be composed of a contribution of sixpence (6d) per week, or any part of a week, by every man employed on public works to which the Fund applies; and a contribution by the Government of threepence (3d) per week per head of men contributing to the Fund.

5. All money contributed by the men as aforesaid shall be paid into a Special Deposit Account in the Treasury, and no person shall under any circumstances whatever have any right to demand a refund of contributions made by him.

Payments out of the Fund shall be made on the authority of the Trustees and not otherwise.

6. The Fund shall be applied for the following purposes:—

(1) To provide medical attendance, medicine and hospital treatment for contributors to the Fund and for their wives and such of their children as being boys are under 14 years and being girls are under 16 years of age, and other persons totally dependent on such contributors (provided such wives, children and other dependents reside with the contributors) in any case of illness or injury provided such illness or injury has not been occasioned by fighting, drunkenness or other misconduct.

(2) To provide ambulance and first aid appliances on the works.

(3) To provide the cost of transporting to a hospital, or to a doctor any sick or injured beneficiary as aforesaid.

(4) To defray the cost of such precautions against disease or sickness as the Trustees may think fit to take including inoculation or vaccination.

(5) In cases of accouchment the provisions of this Fund do not apply. The mileage charges of a medical attendant will not be paid for from the Fund, other than in cases of accident on the works.

(6) To defray the cost of and incidental to the administration of the Fund.

7. No person who contributes to the Fund, and who resides more than three (3) miles from the railway or other public work on which he is employed, shall be entitled to any medical benefits under the Fund, unless he be injured on the works; except in such cases where recommended by the engineer on works and the local union representative; but in no case beyond the limit of five (5) miles.

8. The moneys raised in manner aforesaid on any work shall be credited to that work in the books of the Trust, and all expenses as aforesaid incurred in connection with men employed on such work or their dependents as aforesaid shall be paid out of the moneys so credited and not otherwise. Provided that where expenses are incurred which are in the opinion of the Trustees common to all works to which the Fund applies, or to two or more of them, or which are connected with the general administration of the Fund,

the Trustees may defray the same pro rata from the moneys at the credit of the works respectively or from the moneys at the credit of the works for or in connection with which such expenditure was incurred.

9. Where any work to which the Fund applies is completed or discontinued, any surplus funds credited to that work in the books of the Trust, and any equipment belonging to such work shall be distributed amongst such other public works and in such proportion as the Trustees may decide, or the Trustees may retain any surplus funds as a reserve for future allocation.

10. The Trustees may make rules for regulating their proceedings and for the conduct of the business of the Trust as they may deem necessary or proper.

11. The Trustees may enter into such contracts and agreements and may do all such things, employ such persons, and incur such expenditure for the purposes aforesaid, and for carrying out the objects of this Trust as they may think proper.

12. The Trustees shall meet from time to time and at such place as they shall appoint, and at any meeting of Trustees two members of the Trust shall form a quorum.

Provided that the Chairman may at any time call a special meeting of the Trustees for any purpose.

13. The management of the Fund shall be vested in the Trustees, and the decision of a majority of the Trustees present at a duly constituted meeting shall be final and conclusive as to the subject matter thereof.

Provided that if at two consecutive meetings the voting on any question is equal the matter shall be submitted to the Minister, who, after giving the Trustees an opportunity to state their views in writing, shall decide the matter, and his decision shall be deemed to be the decision of the Trustees for all purposes.

Certificate.

We hereby certify that the bearer.....

*is a dependent of.....

who is employed on the works, is a subscriber to the Medical Fund, and is entitled to the benefits of same.

.....Ganger.

.....Union Representative.

Date.....

* Strike out this line where the claimant is the subscriber himself.

Naval and Military.

We regret to record that Major W. G. D. Upjohn is reported to be ill in hospital.

In the 140th list, issued on February 9, 1916, the name of Captain W. M. A. Fletcher is included among the ill in hospital at Malta. Captain A. P. Drummond is also in hospital. Among those reported in hospital are Major L. W. Dunlop and Captain J. L. Niven.

The following letter has been addressed by the Director-General of Medical Services to the Commandant in each Military District, in reply to a question raised by the South Australian Branch of the British Medical Association. The Commandant has been requested to forward a copy to the Honorary Secretaries of the various Branches of the British Medical Association.

The question of supply of medical officers is a very complicated one. In all Army Services the establishments must be laid down on a maximum basis, and as the conditions under which the troops are operating vary, so will the work of the staffs. There must necessarily be times when there is little to do, but the full staffs must be available in case of emergency, such as follow great battles or epidemics. Recently, just before the evacuation of the Dardanelles, all hospitals in Egypt were evacuated and relieved as far as possible, and extra beds, to increase accommodation by two-fifths, were arranged and placed ready for use. But it turned out there were no casualties, and the staff will be left with empty beds and practically nothing to do.

Another example may be of interest. At the No. 3 A.G.H., at Lemnos (this hospital left Australia with 35 medical officers, including specialists). When the Director-General arrived the senior surgeons had little or nothing to do, and two weeks prior to his visit three medical officers had volunteered and gone for service at Anzac, as there was very little work for them to do. During my visit there were over 1,250 patients, nearly all of whom were medical, and a great number were very acute, with para-typhoid and dysentery. All the specialists, with the exception of the radiographer, were working hard. The oculist had to get an extra assistant. The bacteriologists also, three in number, were working till 10 and 11 o'clock every night.

Within two weeks of the Director-General leaving Lemnos, sickness and other causes had reduced the staff to 13, and assistance had to be given by R.A.M.C., and the radiographers and surgeons were doing medical work. Everyone was greatly overworked. This will always be the history of war work, and more particularly with senior surgeons and radiologists.

At the same time, the Director-General would point out that a great many medical officers have been on service from 12 to 16 months, and are making great personal sacrifices.

We would be glad to relieve some of these officers, but to do so it would be necessary to have others to replace them.

At the date of writing (January 18th), owing to withdrawal of troops from Gallipoli, and with consequent reduction of invaliding and the releasing of medical officers in medical units, there are sufficient medical officers in Egypt. But others are required for transport duty with the large number of troops to be sent forward, for duty in Australia, and to complete the various new medical units to accompany new brigades, for which 120 medical officers alone are required within the next few months.

(Signed) R. H. FETHERSTON,
Director-General,
Australian Army Medical Corps.

January 18, 1916.

The following appointments have appeared in the *Commonwealth of Australia Gazette*, No. 17, under date of February 3, 1916:—

1st Military District.

Australian Army Medical Corps—

Captain C. J. Weedon, to be Major. Dated 1st January, 1916.

Australian Army Medical Corps Reserve—

Percy Frederick Money, to be Honorary Captain. Dated 10th October, 1915. (This cancels the notification respecting this officer which appeared on page 2717 of *Commonwealth of Australia Gazette*, No. 131, of 21st October, 1915.)

Gabriel William Stahel Farmer, to be Honorary Captain. Dated 25th October, 1915.

Joseph Coen, to be Honorary Captain. Dated 3rd November, 1915.

Gerald Patrick Doyle, Andrew Robertson Walker, Andrew Robertson Menzies, William Richard Parker, Arnold Edward Gibson, John Whittaker Ward, Thomas Dallon England, Patrick Michael Coughlin, Alfred Wilton, Ernest Sidney Martin, Walter Frederick Coe, Colin Garcia Frew, Alfred Horace Sagar, Frederick George Butler-Wood, Reginald John Webb, Edward Walter Haenke, Arthur Ure McNaught, Charles Herbert Hall, Alexander John Macfie, Henry William Pottinger, to be Honorary Lieutenants. Dated 1st January, 1916.

3rd Military District.

Australian Army Medical Corps Reserve—

Andrew Honman, to be Honorary Major. Dated 1st January, 1916.

William Ernest Jones to be Honorary Major. Dated 9th September, 1915. (This cancels the notification respecting this officer which appeared on page 2453 of *Commonwealth of Australia Gazette*, No. 116, of 25th September, 1915.)

Robert George McPhee, Alfred Ernest Deravin, Reginald Webster, Herbert Maunsell Hewlett, Keith Russell Moore, and Thomas Edward

Llewellyn Lambert to be Honorary Captains. Dated 1st January, 1916.

Edward Middleton Gawley, Alexander Bertrand Murtee, Albert Victor Huntsman, Henry Buckhurst Walters, Harold Brown Keig, Charles Trevelyn Skewes, Norman Sydney Deravin, and Herbert Henry Richmond to be Honorary Lieutenants. Dated 1st January, 1916.

4th Military District.

Australian Army Medical Corps—

Captain C. Corbin to be Major. Dated 13th January, 1916.

Australian Army Medical Corps Reserve—

Harold Frank Kollosche to be Honorary Captain. Dated 6th December, 1915.

Hugh Bowen James and Charles Henry Souter to be Honorary Captains. Dated 1st January, 1916.

Frederick John Miles to be Honorary Lieutenant. Dated 1st January, 1916.

5th Military District.

Australian Army Medical Corps Reserve—

Adam Henry Muir Macmorran and Samson Courtenay Moore to be Honorary Captains. Dated 1st January, 1916.

Samuel James Faithful to be Honorary Lieutenant. Dated 1st January, 1916.

Honorary Captain A. J. H. Saw to be Honorary Major. Dated 1st January, 1916.

6th Military District.

Australian Army Medical Corps Reserve—

William Atkinson Harrison to be Honorary Captain. Dated 21st June, 1915.

David Hamilton to be Honorary Captain. Dated 1st January, 1916.

Army Medical Corps.

To be Major (with pay of Captain)—

Major J. De B. Griffiths, retired list. Dated 29th December, 1915.

Honorary Major W. Sloss, Australian Army Medical Corps Reserve. Dated 5th January, 1916.

To be Captains—

Captain W. R. Kelly, Australian Army Medical Corps. Dated 30th December, 1915.

Captain J. G. Desailly, Australian Army Medical Corps. Dated 3rd January, 1916.

Captain (provisional) C. L. S. Macintosh, Australian Army Medical Corps. Dated 11th November, 1915.

Honorary Captain M. C. C. Seton, Australian Army Medical Corps Reserve. Dated 1st December, 1915.

Honorary Captain P. F. Money, Australian Army Medical Corps Reserve. Dated 3rd January, 1916.

Ivan Coronel Hains and Arthur Edward Machin. Dated 10th November, 1915.

John Hardie Macarthur and Frederick William Dean Collier. Dated 20th November, 1915.

Valentine Henry Gordon. Dated 22nd November, 1915.

Eric Ivo Lowther Graves and Melrose Holtom Mailer. Dated 24th November, 1915.

Cauldwell Hamilton Anderson and John Alexander Shanasy. Dated 26th November, 1915.

Richard Percy Hill. Dated 30th November, 1915.

Charles Halliley Kellaway, Robert Charles Withington, Joseph Peter Kelly, William James Ellery Phillips, Ivan Bede Jose, Hugh Alexander Wyllie, Daniel Gilbert Miller Teague, Samuel Percival Lyttle, Mark Aloysius Ley, Walter Leonard Smith, Harold Powell, John Bright Birch, Hugh Rayson, and Robert Elbury Jefferis. Dated 1st December, 1915.

John Thomas Jones and Sydney Michael O'Riordon. Dated 17th December, 1915.

William Henry Orchard. Dated 18th December, 1915.

Alfred Meillon Langan. Dated 20th December, 1915.

Henry Laurence Tooth and Clive Frederic Robinson. Dated 23rd December, 1915.

Frank Reginald Longden. Dated 29th December, 1915.

Cyril Charles Minty, Frank Boothroyd, Frank Martindale Farrar, Rupert Duffy Haggaton. Dated 30th December, 1915.

William Macansh. Dated 5th January, 1916.

Cromwell Magarey. Dated 11th January, 1916.

Harry Charles Costello Shaw. Dated 18th January, 1916.

Appointments Terminated.

The appointments of Major A. T. Campbell and Captain J. F. Souter are terminated. Dated 13th December, 1915.

The appointment of Captain F. W. Kane is terminated. Dated 17th November, 1915.

The appointment of Captain J. F. Bartley is terminated. Dated 30th December, 1915.

The following promotions have appeared in the *Commonwealth of Australia Gazette*, No. 19, under date of February 10, 1916:—

Army Medical Corps.

To be Lieutenant-Colonels—

Lieutenant-Colonel M. H. Downey, Australian Army Medical Corps.

Major F. A. Maguire, Australian Army Medical Corps.

Major J. Corbin, Australian Imperial Force.

Dated 10th February, 1916.

CONVICTION FOR PROCURING ABORTION.

A woman named Jane Wilmot was charged at the Court of General Sessions, Melbourne, on February 9, 1916, before Judge Wasley and a jury of 12 with having used an instrument on a girl for the purpose of bringing about an illegal result. The evidence for the prescution was to the effect that the prisoner was given money for the girl, and that at a later date she received a fee of £5 for an operation, which was said to have been successful. The prisoner then expressed herself dissatisfied with the amount received, and her actions led those interested to place the matter in the hands of the police. The defence consisted in a general denial of the charges. The prisoner was sentenced to 12 months' imprisonment.

For some time past dissatisfaction has been felt at the rate of wages paid to employees in various hospitals in Victoria, and especially in Melbourne. The matter has been taken up by the Hospital Employees' Union, and for a time the expedient of a strike was considered. It was felt, however, that such an extreme step would result in increased suffering of the sick, and consequently the proposal was relinquished. As a result of a statement made to the Minister of Labour on February 9, 1916, the latter has promised to adjust matters. A Wages Board has been promised, the Minister will consider whether a conference between the hospital committees and the employees can be arranged, and the Government will give their support to an equitable settlement of the trouble.

Special Correspondence.

(By our Special Correspondent.)

LONDON LETTER.

Surgical Exhibition at the Royal Society of Medicine.

A show of fracture apparatus and other surgical exhibits was opened at the Royal Society of Medicine on October 8th by the Director-General of the Army Medical Service.

Dr. Frederick Taylor, the President of the Royal Society, introduced Sir Alfred Keogh, who, in the course of a short

address, said that he was conscious of the imperfections of modern military surgery in face of the problems with which it had been confronted in the past year. To him it seemed extraordinary that even to-day there should be considerable difference of opinion as to the correct treatment of wounds, more especially in relation to the subject of tetanus, as to which they were practically in a state of pure empiricism. It was "up to" our scientific experimenters to tell surgical practitioners what was the proper treatment of tetanus. The collection which he had to declare open had been got together not so much to display what had been done at the front or to teach surgeons here what they should do, as to enable the doctors on active service to compare notes with those at home with regard to the cases which were sent back to this country, and of which, as a rule, they afterwards heard so little. Some of the army surgeons complained of this absence of information as to the men under their care, after they left them, while surgeons at home complained that often, in the hurry and confusion of transportation on to the hospital ships insufficient information, and in some cases no information at all, was given as to the patients. He hoped that during the time the exhibition was open it would be possible to establish some system under which there would be constant communication between Army surgeons in England and France. With regard to the Dardanelles, of course, there were difficulties in the way.

Sir Almroth Wright subsequently gave a demonstration of his recent researches in the drainage of wounds. He pointed out that nowadays every one has become alive to the fact that the problem of dealing with the bacterial infection of wounds is much greater than was formerly believed. "I have never seen any good from antiseptics applied to wounds," said Sir Almroth. "I am not speaking of antiseptics used in fluids for washing out wounds, and so forth, but of the use of antiseptics with the object of killing germs in wounds. I have also heard strong French opinions that antiseptics do no good."

The Physical Health of Munitions Operatives.

The Minister of Munitions of War, with the concurrence of the Home Secretary, has appointed a Committee "to consider and advise on questions of industrial fatigue, hours of labour, and other matters affecting the personal health and physical efficiency of workers in munition factories and workshops."

The members of the Committee are:—

Sir George Newman, M.D. (Chairman).
Sir Thomas Barlow, Bart., K.C.V.O., F.R.S.
G. Bellhouse, Factory Department, Home Office.
Professor A. E. Boycott, M.D., F.R.S.
J. R. Clynes, M.P.
E. L. Collis, M.B., Factory Department, Home Office.
W. M. Fletcher, M.D., F.R.S., Secretary of Medical Research Committee.
Leonard E. Hill, M.B., F.R.S.
Samuel Osborn, J.P., Sheffield.
Miss R. E. Squire, Factory Department, Home Office.
Mrs. H. J. Tennant.

Mr. E. H. Pelham has been appointed Secretary to the Committee. The Committee will hold its meetings at the Offices of the Board of Education.

A Cambridge Fellowship for General Smuts.

The Master and Fellows of Christ's College, Cambridge, have elected the Hon. J. C. Smuts, K.C., Commandant-General of the South African Defence Force and Minister of Finance and Defence in the South African Union Cabinet, an Honorary Fellow of the College.

General Smuts was educated at the Cape University and at Christ's College, being a scholar of the latter institution. He took his degree in the Law Tripos of 1894, and established a record which has never been surpassed by being placed senior in both parts of that tripos in the same term. He was also awarded the George Long Prize. The name of General Smuts was coupled with that of General Botha in the motion of appreciation of Parliament on July 13 of this year for the distinguished skill and ability with which the military operations in South-West Africa were planned and conducted.

The Control of the Liquor Traffic.

The chief constables of the areas in England and Wales affected by the orders of the Central Control Board for the Liquor Traffic met the Board in conference in London on September 24. The Chairman of the Board, in his address, quoted extracts from the reports, showing a great improvement in time-keeping in dock areas, and a marked increase in the sobriety of seamen and firemen in the transport areas. In shipbuilding yards and munition works time-keeping was undoubtedly better, and the output had been increased. The total weekly average of prosecutions for drunkenness in the areas for the four weeks before the Board's order was 734. The total weekly average to date subsequent to the orders is 396, a decrease of over 40%.

The public had readily responded to the action of the Board, and in no area had there been the smallest difficulty. Moreover, the licensed victualling trade had carried out the orders with exemplary loyalty, and with obvious determination to do what was required of them in the great national crisis.

Chief constables present expressed their unanimous approval of the orders, which had been welcomed by the great majority of the public.

The following official notice has been issued from the offices of the Board:—

> The Central Control Board for Liquor Traffic have for some time past been giving careful consideration to the question of the regulation of the liquor trade in the metropolitan area, which presents problems of greater complexity and difficulty than those of some of the districts to which their orders relate. An Order-in-Council has been made scheduling the City of London, the whole of the Metropolitan police district, the Petty Sessional division of Romford, and the urban district of Watford, with the Dartford area, as an area under the Defence of the Realm (Amendment) Act. In view of the urgent representations of the military authorities the Board will proceed to issue an order regarding treating. The dilution of spirits to 45° underproof in the case of gin, and to 35° underproof in the case of other spirits will be permitted. The question of the restriction of hours and other matters usually dealt with by the Board's orders are being carefully considered with a view to the special requirements of London.

Memorial to the Captain Scott Expedition.

The Mansion House Committee of the Captain Scott Memorial Fund are, with the permission of the Dean and Chapter, about to erect a bronze bas-relief in St. Paul's Cathedral in memory of the explorers. The sculptor is Mr. S. Nicholson Babb. The model was recently exhibited at the Royal Academy.

At the request of the Committee, Earl Curzon of Kedleston composed the inscription, which will run:—

> "In memory of Captain Robert Falcon Scott, C.V.O., R.N., Dr. Edward Adrian Wilson, Captain Lawrence, E. G. Oates, Lieut. Henry R. Bowers, and Petty Officer Edgar Evans, who died on their return journey from the South Pole in February and March, 1912. Inflexible of purpose, steadfast in courage, resolute in endurance in the face of unparalleled misfortune. Their bodies are lost in the Antarctic ice. But the memory of their deeds is an everlasting monument."

Correspondence.

THE DRESSING OF WOUNDS AT ANZAC.

Sir,—It will be a matter of much interest to regimental medical officers when this cruel war is ended to learn what proportion of wounded men developed tetanus and septicæmia. I remember after one awful period of 60 hours spent in captured trenches at Anzac, during which time I dressed innumerable wounds, and the majority of them in the dark, the thought occurred to me that quite a large number of the men might be expected to develope some form of blood poisoning. The skin of the wounded men, who had not had a wash for days, their supply of water

being one pint *per diem*, and who for months had had to rely on an occasional sea bath, and that probably at long intervals, would naturally have a septic character. And, further, when one thinks that the surgeon or A.M.C. man who dressed them was no better off in personal cleanliness, the chance of a wound remaining free from infection must be very remote. Of course, the dresser did his utmost to avoid handling the wound or the dressing, and no doubt the little dose of iodine tincture would help, if only in a mechanical way. Still, dressing a wound in the dark, when one had to rely for light on the enemy's "star shell," if he were good enough to throw one up at the critical moment, meant, in the majority of cases, that the dresser had to feel for the wound and dab his dressing on the spot where he could feel the hot blood welling up.

I remember feeling truly pleased on the day after our release from hell—for such one might truly call the return from Lonesome Pine to the old firing line—to learn that the surgeon at the dressing station, which had been built and dug near brigade headquarters, had not in single instance found a dressing stuck on the wrong spot.

Yours, etc.,

R.M.O.

ORTHOPÆDICS AND THE WAR.

Sir,—Your editorial of the 8th ultimo, and the letter of "Aviator" draw attention to a very real gap that exists in the methods of treatment of our wounded soldiers, one which must be bridged by the followers of the youngest of the specialities, that of orthopædic surgery. Anyone who has seen many of the returned wounded, must be struck by the frequency with which gunshot wounds of a limb are accompanied by long-standing consequent disabilities, by a lack of power in the whole of the affected limb, even in joints and muscles remote from the wound, and due to prolonged disuse, by weakness of the muscles, amounting in many cases to absolute inability to contract, by atrophy of the limb, by postural malpositions with overaction and structural shortening of one set of muscles controlling a joint, by stiffness of the joints amounting to ankylosis, due to shortening of the ligaments, owing to disuse, by dystrophies of the joints, erosion of the bony tissues, and by traumatic arthrites, etc.

These are all remediable, and, more, are preventible. To allow them to happen has a twofold effect on the soldier; it exposes him to unnecessary suffering, and it interferes with his usefulness, and causes him to be a charge on the State for a longer period than need be.

Our enemy, the German, has already realized this, and in most of their hospitals where the wounded are treated, a set of "Golden Rules" is inscribed in prominent places, giving directions as to early movement, active and passive, and warning against the implication of unnecessary joints by such splints as have to be applied.

The effects of gun-shot wounds has brought before us many problems not encountered in general surgery, and of these the early restoration to function is perhaps the most important, and much could be done for such cases by men trained in the principles of orthopædic work.

The staff of masseurs and masseuses in the base hospitals might be largely augmented, and once the acute condition of sepsis has passed off, they should be set to work on the limb; active movements of all the unaffected joints should be early instituted. It is astonishing the amount of disuse atrophy and stiffness one sees months afterwards in the soldiers who have returned here.

At the convalescent hospitals, after the patient has left the base hospital, men trained to this work should institute such orthopædic measures as are necessary, and initiate a line of treatment suitable for each case; this could be continued on board ship where further, some gymnasium treatment could be begun; finally, on their return to home hospitals a more elaborate orthopædic department could be established, where the bulk of them could be treated as out-patients. Ambulatory splints, suitable boots, and artificial limbs could here be supplied; massage given under supervision; and finally a gymnasium, installed with suitable appliances for the quick re-education of the affected muscles.

The work on these lines by Robert Jones in England, and his results are attracting much attention there; similar good work is being done in France by members of the American Orthopædic Association. The question of operative measures in these cases, where they are needed to correct deformities is a problem of its own, on account of the numerous foreign bodies, shell case fragments, etc., left in the limb, and the risk of subsequent infection on opening up these areas again.

As "Aviator" suggests, lectures could be given to the younger men, going out to the front, on orthopædic methods, and they and masseuses could have a special short preliminary training at the home orthopædic department, before leaving for work, on wounded in the earlier stages.

Yours, etc.,

R. B. WADE.

"Wyoming," Macquarie Street, Sydney,
January 19, 1916.

The following is taken from the July number of *The American Journal of Orthopaedic Surgery*:—

Twelve Commandments for Prevention of Crippling Among Wounded.

By A. Ritschl, *Deutsch. Medizin. Wochensch.*, Jan. 28, 1915, XLI., No. 5 (Abstracted in Journ. A.M.A., March 6, 1915, p. 863).

A set of rules has been placarded broadcast throughout the hospitals in Germany and at the front. They impress the fact that repose is harmful for both joints and muscles, making joints stiff and muscles weak and emaciated; that time, trouble, and expense will be saved by striving to ward off all disturbances in motor functioning, and by insisting on prompt orthopædic or mechanical after-treatment if such becomes necessary.

4. Shorten as much as possible the period when the joint is kept still; have it exercised as soon as possible, and change its angle frequently. Keep up the strength in the muscles menaced by the enforced repose, having massage and electricity applied early and systematically, with active exercises.

5. Remember that the extensor muscles deteriorate faster than the flexors; pay especial attention to the deltoid muscle in the arm and the quadriceps in the knee, for the arm and leg cannot be used properly if the extensors are weakened.

6. In immobilizing, place the shoulder, elbow, wrist, fingers, knee and other joints in the position most favourable for their functional use later, as is described for each in turn.

7. Do not allow the hand to droop from its own weight when the arm is in a sling, as this favours stiffness of the fingers, and prevents grasping movements.

8. Leave the fingers exposed so they can be worked freely, and warn the patient to keep them continuously working vigorously to ward off stiffness. Save enough of the hand to grasp things with, if possible, as there is no feeling in an artificial hand, and it is thus decidedly inferior to even a mutilated stump that can still grasp articles.

9. Stimulate the circulation by exercising the legs and by deep breathing, even when the man is unable to be up, as stimulating the circulation has a beneficial action throughout the body, promoting nutritional processes and repair in general.

10. Get rid of extravasted blood by measures to promote absorption, etc., such as raising the limb, massage, heat, alternating hot and cold douches, as blood coagulating in the tissues keeps up a constant irritation, entailing adhesions and binding together the tissues in the region involved. When connective-tissue adhesions develop, there is no possibility of absorption later. Remember that the circulation of blood and lymph is most sluggish towards the end of the limbs, so that artificial aid is particularly required for extravasated blood in these regions."

The last "commandment" warns not to disregard the mechanical factors involved, "for our motor apparatus is a marvellous mechanical apparatus, and only those who understand the mechanism of a machine, and are good mechanics are able to start a complicated mechanical apparatus to work again."—Roland Hammond, M.D., Providence, R.I.

Books Received.

THE ADOLESCENT PERIOD, ITS FEATURES AND MANAGEMENT, by Louis Starr, M.D., LL.D. Philadelphia: P. Blakiston's Son & Co., demi 8vo., pp. 211. Price, 4s. 6d.

THE PRACTICAL MEDICINE SERIES: VOL. IX., SKIN AND VENEREAL DISEASES, edited by Oliver S. Ormsby, M.D., with the collaboration of James Herbert Mitchell, M.D., under the general editorial charge of Charles L. Mix, A.M., M.D. Miscellaneous Topics edited by Harold N. Moyer, M.D.; Series 1915. Chicago: The Year Book Publishers; pp. 240. Price, 6s.

THE PRACTICAL MEDICINE SERIES: VOL. X., NERVOUS AND MENTAL DISEASES, by Hugh T. Patrick, M.D., and Peter Bassoe, M.D., under the general editorial charge of Charles L. Mix, A.M., M.D.; Series 1915. Chicago: The Year Book Publishers; pp. 240. Price, 6s.

Medical Appointments.

In the New South Wales Government *Gazette*, No. 31, of February 11, it is announced that Dr. William George Armstrong, M.B., M.S., D.P.H., Senior Medical Officer, Office of the Director-General of Public Health, has been appointed a member of the New South Wales Medical Board, in the place of the late Dr. W. Odillo Maher.

Dr. Charles Savill Willis, M.B., M.S., M.R.C.S., L.R.C.P., D.P.H.R.C.P.S., Principal Medical Officer, Department of Education, and Dr. Alick Murray Will, M.B., M.S., have been appointed to the positions on the New South Wales Medical Board rendered vacant by the resignations of Dr. J. A. Beattie, and Dr. C. P. B. Clubbe.

Dr. F. C. B. Hittman has been appointed Government Medical Officer at Wee Waa, in the place of Dr. E. L. Hutchinson (resigned).

The following nominations for election to the Medical Board of Western Australia have been made by His Excellency the Governor-in-Council: The Hon. A. J. H. Saw, Drs. T. H. Lovegrove, H. T. Kelsall, W. Trethowan, T. L. Anderson, R. C. E. Atkinson and R. C. Merryweather. Dr. T. H. Lovegrove has been nominated for the office of President of the Board.

Dr. J. T. Tennant has been appointed Government Medical Officer at Kurri Kurri, New South Wales, in place of Dr. D. C. Henry (resigned).

Dr. L. L. McMahon has been appointed District Medical Officer and Public Vaccinator, Wyndham, Western Australia, during the absence of Dr. Innes Stephen, who is on sick leave.

Dr. T. C. Boyd has been appointed Medical Officer of Health at Geraldton, Western Australia, in place of Dr. A. H. Macmorran (resigned).

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser," page xiii.

Oberon District, Medical Officer.
Women's Hospital, Melbourne, Resident Surgeons.
Texas District Hospital, Queensland, Medical Officer.
Broken Hill and District Hospital, Resident Medical Officers.
Royal Hospital for Women, Paddington, Honorary Anæsthetist.

Medical Appointments.

IMPORTANT NOTICE.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London, W.C.

Branch.	APPOINTMENTS.
WESTERN AUSTRALIA. (Hon. Sec., 230 St. George's Terrace, Perth.)	Swan District Medical Officer. All Contract Practice Appointments in Western Australia.
NEW SOUTH WALES. (Hon. Sec., 30-34 Elizabeth Street, Sydney.)	Department of Public Instruction—New Appointments as Medical Officer, Ophthalmic Surgeon, Ear, Nose and Throat Surgeon, Physician. Australian Natives' Association. Balmain United F.S. Dispensary. Canterbury United F.S. Dispensary. Goulburn F.S. Association. Leichhardt and Petersham Dispensary. M.U. Oddfellows' Med. Inst., Elizabeth Street, Sydney. Marrickville United F.S. Dispensary. N.S.W. Ambulance Association and Transport Brigade. North Sydney United F.S. People's Prudential Benefit Society. Phœnix Mutual Provident Society. F.S. Lodges at Casino. F.S. Lodges at Lithgow. F.S. Lodges at Mudgee (except A.H.C.G., M.U.I.O.O.F., U.A.O.D., and P.A.F.S.). F.S. Lodges at Orange. F.S. Lodges at Parramatta, Penrith, Auburn, and Lidcombe. Newcastle Collieries — Killingworth, Seaham Nos. 1 and 2, West Wallsend.
SOUTH AUSTRALIA. (Hon. Sec., 3 North Terrace, Adelaide.)	The F.S. Medical Assoc., Incorp., Adelaide.
QUEENSLAND. (Hon. Sec., B.M.A. Building, Adelaide Street, Brisbane.)	Brisbane United F.S. Institute. Croydon Hospital. Ladley Hospital, Medical Officer
NEW ZEALAND: WELLINGTON DIVISION. Hon. Sec., Wellington.)	F.S. Lodges, Wellington, N.Z.

Diary for the Month.

Feb. 23.—Vict. Branch, B.M.A., Council.
Feb. 24.—S. Aust. Branch, B.M.A., General.
Feb. 29.—N.S.W. Branch, Medical Politics Committee, Organization and Science Committee.
Mar. 1.—Vic. Branch, B.M.A., Branch.
Mar. 3.—Queensland Branch, B.M.A., Branch.
Mar. 8.—South Sydney Med. Assoc. (N.S.W.), Annual.
Mar. 9.—Vic. Branch, B.M.A., Council.
Mar. 10.—South Aust. Branch, B.M.A., Council.
Mar. 15.—West. Aust. Branch, B.M.A., General.
Mar. 16.—N.S.W. Branch (Last day for Nomination of Candidates for Election of Council).

EDITORIAL NOTICES.

Manuscripts forwarded to the office of this Journal cannot under any circumstances be returned.

Original articles forwarded for publication are understood to be offered to *The Medical Journal of Australia* alone, unless the contrary be stated.

All communications should be addressed to "The Editor," *The Medical Journal of Australia*, B.M.A. Building, 30-34 Elizabeth Street, Sydney, New South Wales.